EXTERNAL NOISE ASSESSMENT

CLIENT

Agform Ltd
Maidenstone Heath
Blundell Lane
Bursledon
Hampshire
SO31 1AA

SITE

Land Adjacent to
Maidenstone Heath
Blundell Lane
Bursledon
Hampshire
SO31 1AA

SURVEY DATE (S)

11th – 14th September 2015

Report By

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Introduction:

Sound Advice Acoustics Ltd has been instructed by Agform Ltd, to carry out the relevant noise assessments and calculations at the land adjacent to Maidenstone Heath, Blundell Lane, Bursledon, Hampshire, SO31 1AA. It is proposed that the existing land is to be developed for new build housing.

Ambient noise levels were measured between 11th – 14th September 2015. This report by Sound Advice Acoustics Ltd gives the results of these measurements and an assessment in accordance with government planning guidelines and relevant standards together with mitigation measures as required.

With regards to external ambient noise, environmental noise levels are be monitored at the site in accordance with British Standard 7445: 2003 'Description and measurement of environmental noise assessments and calculation made in accordance with BS 8233: 2014 Sound Insulation and Noise Reduction for Buildings Code of Practice.

BS 8233: 2014 set the following parameters as target levels that should be designed to within rooms such as Living Rooms and Bedrooms.

Table 2 Indoor ambient noise levels in spaces when they are unoccupied and privacy is also important

Objective	**Typical situations**	**Design Range $L_{Aeq,t}$ dB**
Typical noise levels for acoustic privacy in shared spaces	Restaurant	40 – 55
	Open plan office	45 – 50
	Night club, public house	40 – 45
	Ballroom, banqueting hall	35 – 40
	Living room	35 – 40

NOTE See Noise control in building services [28] and BS EN ISO 3382.

Table 4 Indoor ambient noise levels for dwellings

Activity	Location	07:00 – 23:00	23:00 – 07:00
Resting	Living Room	35 dB $L_{Aeq\ 16\ HOUR}$	--
Dining	Dining Room / Area	40 dB $L_{Aeq\ 16\ HOUR}$	--
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq\ 16\ HOUR}$	30 dB $L_{Aeq\ 8\ HOUR}$

Calculations and assessments are therefore to be carried out in order to satisfy the above requirements of BS 8233: 2014.

References and evaluations are to be made to the National Planning Policy Framework 2012 (NPPF) and the Noise Policy Statement for England 2010 (NPSE). The purpose of this document is to include all aspects of environmental noise within assessments i.e. environmental noise, neighbour noise and neighbourhood noise. Noise is to be considered alongside other relevant issues relating to the site and should not be considered in isolation, according to the NPSE.

There are several key phrases within the NPSE aims and these are discussed below.

"*Significant adverse" and "adverse"*

There are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organisation. They are:

NOEL – No Observed Effect Level

This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

LOAEL – Lowest Observed Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected.

Extending these concepts for the purpose of this NPSE leads to the concept of a significant observed adverse effect level.

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.

It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available.

In addition, calculations are to be made for the predicted daytime noise levels within the outdoor living area and assessments made against the recommended levels within the World Health Organisation's 'Guidelines for Community Noise'. In order to evaluate these levels accurately, the 3D modelling software CADNA A is to be adopted for the purpose of this assessment.

Finally, assessments and references are to be made to the World Health Organisation Night Time Noise Guidance 2009.

Procedure:

External noise levels were recorded over a typical weekend period and analysis date extrapolated between 07:00 hrs 11th September 2015 – 07:00 hrs 14th September 2015 at positions 1 and 2 as detailed on the attached plan sketch layout.

Position 1 was located at the south of the site in order to capture the noise levels associated with the nearby roads and railway, position 2 was located to the north of the site in order to capture the lowest noise levels of the site. Sample measurements were recorded over continuous 5 minute samples and from this data the hourly LAeq daytime values have been evaluated. Sound Pressure Levels were recorded on the following setting along with a full octave band frequency analysis measured simultaneously and between 31.5 Hz and 16.0 kHz.

Daytime 07:00 – 23:00		**Night Time 23:00 – 07:00**	
$L_{Aeq\ 1\ HOUR}$ dB	$L_{A10\ 1\ HOUR}$ dB	$L_{Aeq\ 5\ MINUTES}$ dB	$L_{A10\ 5\ MINUTES}$ dB
$L_{AMAX\ 1\ HOUR}$ dB	$L_{A50\ 1\ HOUR}$ dB	$L_{AMAX\ 5\ MINUTES}$ dB	$L_{A50\ 5\ MINUTES}$ dB
$L_{AMIN\ 1\ HOUR}$ dB	$L_{A90\ 1\ HOUR}$ dB	$L_{AMIN\ 5\ MINUTES}$ dB	$L_{A90\ 5\ MINUTES}$ dB

Calculations have been made in accordance with BS 8233: 2014 'Sound Insulation and Reduction of Buildings - Code of Practice'. Recommendations were made for any additional acoustics measures to conform to these standards.

From the downloaded recorded results the daytime and night time periods were assessed and used within the above calculations as $L_{Aeq\ 16\ HOUR}$ dB levels for daytime and $L_{Aeq\ 8\ HOUR}$ dB levels for night time. These are detailed on the attached figures 1 – 6 inclusive. All data averaged throughout the day has been done so on a logarithmic basis to give accurate $L_{Aeq\ 16\ Hour}$ dB daytime and $L_{Aeq\ 8\ Hour}$ dB night time noise levels.

Finally it should be noted that calculations are carried out with façade levels corrected from the recorded noise levels to the calculated façade levels.

Apparatus:

The equipment was calibrated using a sound pressure level of 114.0 dB at an octave band centre frequency of 1000Hz with reference to 2 x 10^{-5} Nm^{-2} before and after the tests and the equipment set to have no inaccuracy greater than 0.2 dB.

All the following equipment was calibrated in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service (UKAS) on the following dates. Calibration schedules are implemented within Sound Advice Acoustics Ltd in accordance with UKAS directive LAB 23.

Description	Make	Type	Serial No.	Calibration Intervals	Last Calibrated	Next Due Calibration
Integrated Sound Level Meter	Rion	NL-52	00242696	2 YEARS	23.04.2014	23.04.2016
12.5mm Microphone (with windshield)	Rion	UC-59	06178	2 YEARS	23.04.2014	23.04.2016
Microphone Pre – Amplifier	Rion	NH-25	32724	2 YEARS	23.04.2014	23.04.2016

Description	Make	Type	Serial No.	Calibration Intervals	Last Calibrated	Next Due Calibration
Integrated Sound Level Meter	Norsonic	140	1403140	2 YEARS	27.05.2014	27.05.2016
12.5mm Microphone (with windshield)	Norsonic	1220	52260	2 YEARS	27.05.2014	27.05.2016
Microphone Pre – Amplifier	Norsonic	1201	30233	2 YEARS	27.05.2014	27.05.2016

Full calibration certificates are available upon request.

Environmental Conditions:

START OF TEST	11th September 2015
Temperature:	13.0^{0}C
Relative Humidity	81%
Average Wind Speed:	<0.5 m/s
Cloud Cover:	Moderate
Road Surface	Dry
Atmospheric Pressure:	1014mb

END OF TEST	-	14th September 2015
Temperature:		11.0^{0}C
Relative Humidity		94%
Average Wind Speed:		<0.5 m/s
Cloud Cover:		Full
Road Surface		Wet
Atmospheric Pressure:		993mb

* Wind speed, temperature and relative humidity were all recorded using standard equipment supplied by RS Components, Hedge End, Southampton and are taken as an average over the designated time period.

Results:

$L_{Aeq,t}$ - The equivalent A weighted sound pressure level recorded over a time interval of 5 minutes night time and 1 hourly daytime.

$L_{A90,t}$ - The A weighted sound pressure level that is exceeded for 90% of the time period 5 minutes night time and 1 hourly daytime.

$L_{A50,t}$ - The A weighted sound pressure level that is exceeded for 50% of the time period 5 minutes night time and 1 hourly daytime.

$L_{A10,t}$ - The A weighted sound pressure level that is exceeded for 10% of the time period 5 minutes night time and 1 hourly daytime.

L_{Amax} - The maximum A weighted sound pressure level recorded over a time interval of 5 minutes night time and 1 hourly daytime.

L_{Amin} - The minimum A weighted sound pressure level recorded over a time interval of 5 minutes night time and 1 hourly daytime.

See attached figures 1 - 6 for full downloaded results, and averages.

11th – 14th September 2015 – POSITION 1

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 23:00 DAYTIME AVERAGE $L_{Aeq\ 16\ HOUR}$	57.0	72.1	53.8	58.0	56.4	55.3	61.8	62.7	55.3	51.6	53.5	54.6	45.9	39.1	42.9	28.6
23:00 - 07:00 NIGHT TIME AVERAGE $L_{Aeq\ 8\ HOUR}$	53.9	61.7	49.5	55.7	53.5	51.5	55.8	56.1	47.5	44.7	47.5	49.5	45.2	44.5	46.8	30.0

11th – 14th September 2015 – POSITION 2

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 23:00 DAYTIME AVERAGE $L_{Aeq\ 16\ HOUR}$	57.9	63.1	54.9	59.4	57.4	55.9	59.7	60.3	54.6	50.0	52.0	55.6	47.6	46.0	44.5	24.2
23:00 - 07:00 NIGHT TIME AVERAGE $L_{Aeq\ 8\ HOUR}$	54.3	60.5	50.3	56.3	53.6	51.7	55.0	55.2	48.3	44.0	45.8	49.8	47.0	47.0	44.5	27.6

Discussion of Results:

It can be seen from the attached graph and downloaded results that the external noise levels have followed the expected path and remained fairly constant throughout the day. The levels then gradually dropped off as the evening progressed and began to rise when morning traffic levels increased.

Recommendations:

For the purpose of this assessment, the corresponding façade levels will be used within the BS 8233: 2014 calculations in order evaluate the worst case scenario and select the correct window specification.

Therefore in order to achieve the required noise levels of $L_{Aeq\ 16\ HOUR}$ 35 dB for habitable room's daytime and $L_{Aeq\ 8\ HOUR}$ 30 dB for Bedroom at night within the proposed residential properties, the following additional acoustic measures have been calculated. (Details on calculation sheets figure's 7 - 8 inclusive).

It should be noted that the calculations have been made with the proposed windows closed. Additional calculations were made for the top floor due to the influence of sound transmission into the various rooms via the roof / ceiling i.e. an increased impeding façade. Inputted levels into the calculation sheets have been corrected for distance attenuation and free field in accordance with the aforementioned British Standard.

MINIMUM CONSTRUCTION DETAILS

STANDARD WALL CONSTRUCTION – MINIMUM VALUE

125	250	500	1.0k	2.0k	4.0k	Rw dB	Frequency (Hz)
47.0	53.0	61.0	68.0	73.0	78.0	54.0	dB reduction

WINDOW CONSTRUCTION 4mm glass / 16mm air gap / 4mm glass

125	250	500	1.0k	2.0k	4.0k	Rw dB	Frequency (Hz)
21.1	19.7	31.1	38.2	41.3	38.7	35.0	dB reduction

ROOF CONSTRUCTION – MINIMUM VALUE

125	250	500	1.0k	2.0k	4.0k	Rw dB	Frequency (Hz)
28.0	34.0	40.0	45.0	49.0	53.0	44.0	dB reduction

TRICKLE VENT – MINIMUM VALUE

125	250	500	1.0k	2.0k	4.0k	Rw dB	Frequency (Hz)
33.0	32.0	29.0	29.0	31.0	33.0	30.5 (open)	dB reduction

Night Noise Guidelines for Europe 2009:

The Night Noise Guidelines 2009 make direct reference to the World Health Organisations Guidelines for Community Noise 1999 with recommended guideline criteria of L_{Aeq} 30 dB indoors for continuous noise. The document goes on to explain that sleep disturbance correlates best with L_{Amax} and effects have been observed at 42 dB or less. This is particularly true if the background noise level is low. Noise events exceeding 45 dB(A) should therefore be limited.

It should be noted that BS 8233: 2014 makes no reference to a criteria under this British Standard to L_{Amax} dB limits within bedrooms at night. The aforementioned documents are Guidelines and therefore should be used for reference purposes only.

Figure 8 calculates an internal bedroom level at night of $L_{Aeq\ 8\ HOUR}$ 27.1 dB. The corresponding night time external level of $L_{Aeq\ 8\ HOUR}$ 54.3 dB was recorded as detailed of figure 6 thus giving an overall façade attenuation of 27.2 dB. Applying this to the L_{Amax} 42 dB level above results in an L_{Amax} target level of L_{Amax} 69.2 dB.

There have only been a total of 4 exceeded 5 minute levels over a total evaluated period of 24 night time hours. This equates to an L_{Amax} dB level exceedance of just 1.39 % over the three nights.

Therefore, in our professional opinion we would consider this to be an acceptable level increase and no further remedial works need be introduced over and above those already contained within this report.

Outdoor Living Areas:

The World Health Organisation 'Guidelines for Community Noise gives guidance as to desirable noise levels that should be achieved within outdoor living areas such as gardens, patios and verandas etc.

Table 1: Guideline values for community noise in specific environments, details the desirable target noise levels within various areas.

Outdoor Living Area	
Serious Annoyance, daytime and evening	$L_{Aeq\ 16\ HOUR}$ 55 dB
Moderate Annoyance, daytime and evening	$L_{Aeq\ 16\ HOUR}$ 50 dB

In order to evaluate the external noise levels within the proposed development, and to correctly and accurately select the precise required minimum screen heights, the 3D modelling software CADNA A is to be used. Initially, the site plan is to be overlaid onto Google Earth and then imported directly into CADNA A using the geometric co-ordinates.

From this, the monitoring positions and noise sources such as roads are added. The output noise levels from the roads are then increased until the monitored noise levels are achieved at the monitoring position. This model is then saved and used as a working 3D acoustic model of the site.

The proposed buildings are then constructed on a 3D bases and receptors placed within the garden areas.

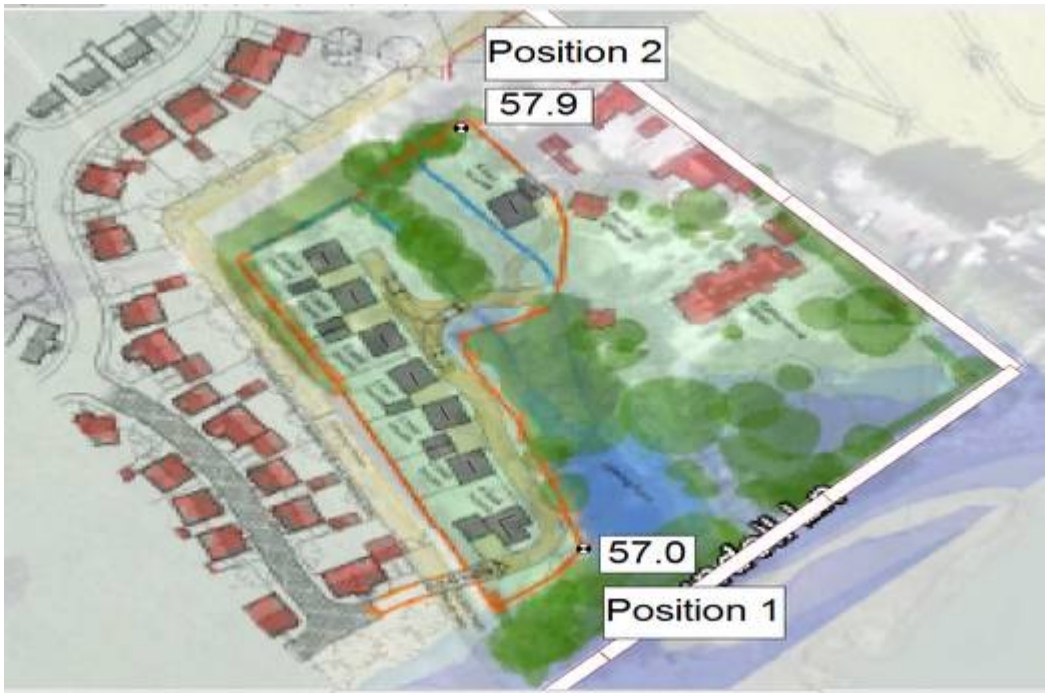
The calculation software is then run to evaluate the garden levels within sample plots across the development.

The following CADNA A screen shots demonstrate the existing sites working 3D model. The levels at the measurement position correlate with the measured daytime average levels detailed on page 9 of this report.

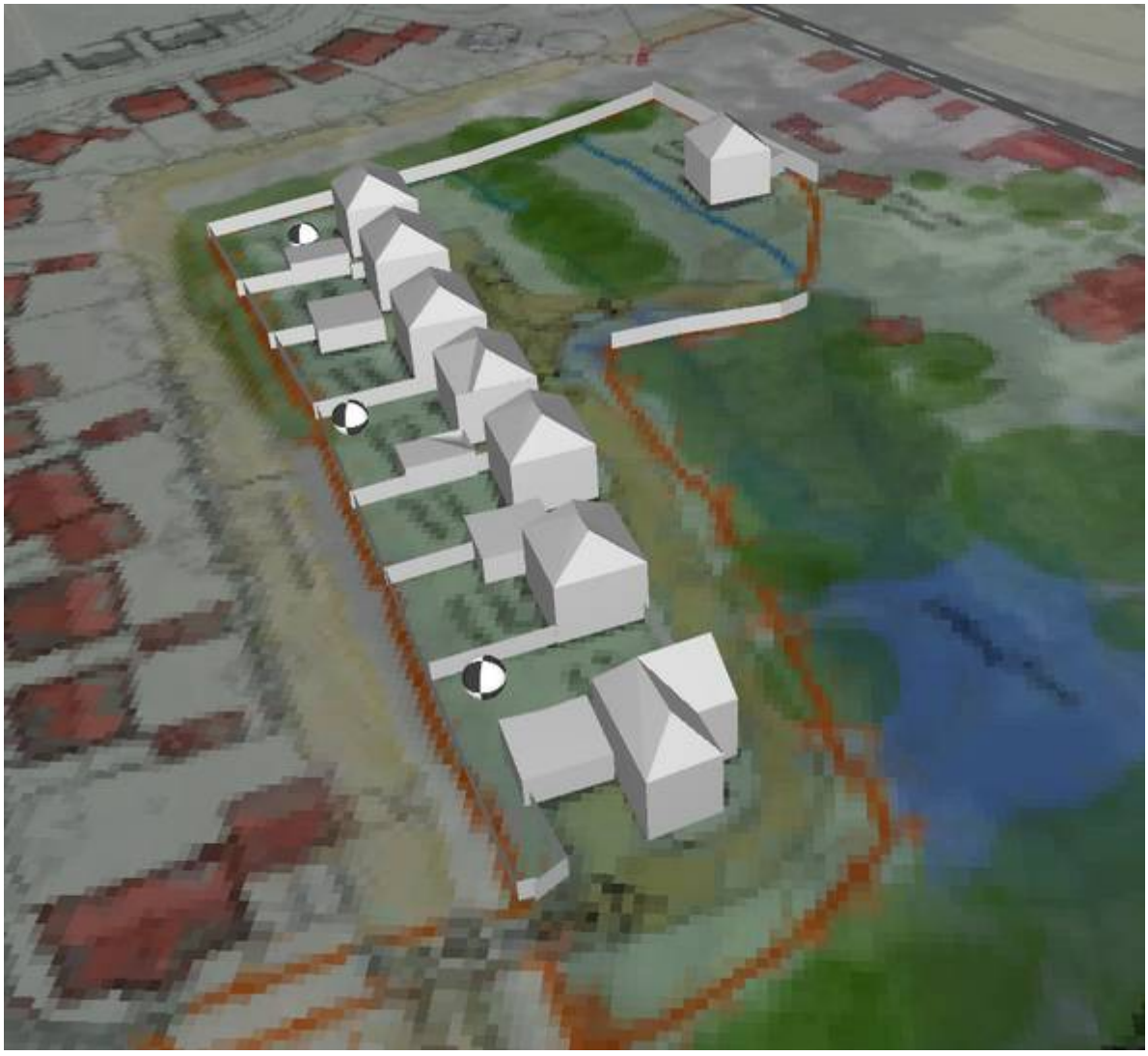
Plan View



Zoomed in View



3D View



The development has external living areas on the development and therefore this criteria / guideline would be appropriately considered within the proposed rear residential garden areas. The highest daytime calculated level of $L_{Aeq\ 16\ HOUR}$ 54.7 dB would be below that of the $L_{Aeq\ 16\ HOUR}$ 55 dB upper guideline.



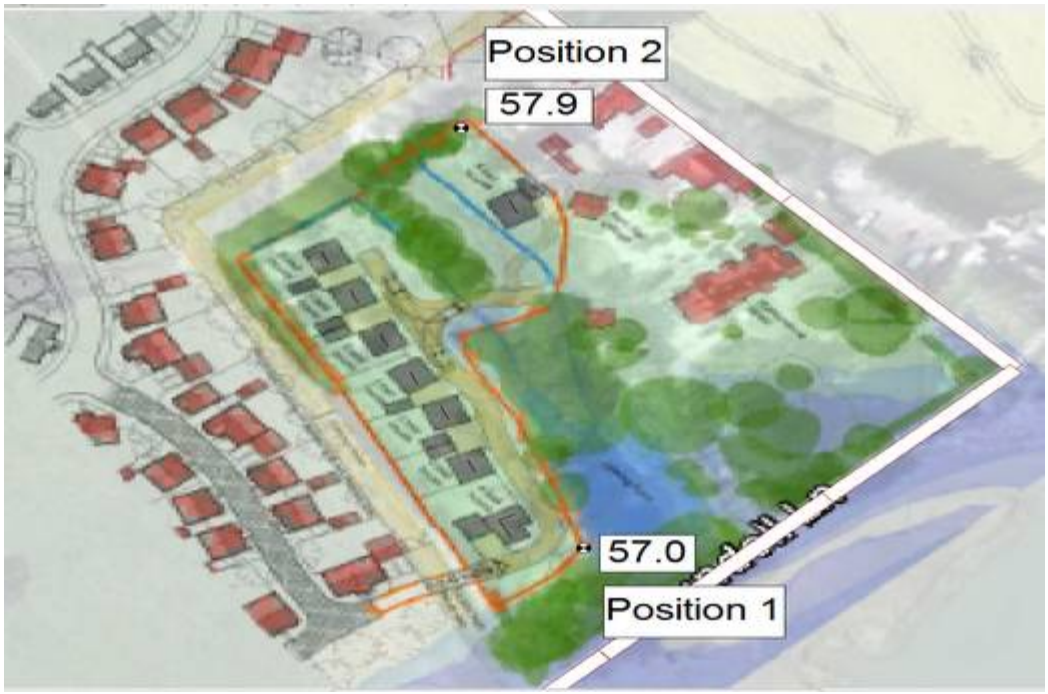
2.5m fence

1.8m fence

The upper guideline has been considered an acceptable criteria for this assessment given the sites geographical location and proximity to the M27 and nearby railway line. The layout has been re-designed in order to allow for acoustics and minimise the noise levels within the outdoor living spaces.

However, in order to achieve these levels a 2.5m high fence should be constructed along the entire boundary of the proposed four bedroom house at the north east of the site and the existing Barn Owl Cottage. This will suitably protect the garden areas of those properties closest to the road source.

Plan Sketch Layout:



NPPF & NPSE:

The National Planning Policy Framework 2012 (NPPF) and assessments to the Noise Policy Statement for England 2010 (NPSE) should be made in conjunction with each other. Paragraph 123 of the National Planning Policy Framework (NPPF) states the following:

Planning polices and decisions should aim to:

- ✓ avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;
- ✓ mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;
- ✓ recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and
- ✓ identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

The Noise Policy Statement for England gives various levels of effect as detailed within this report.

With the glazing / ventilation specifications achieved within this report, the development can be implemented within the guidelines of the aforementioned documents and ensure a development conclusion of **NOEL – No Observed Effect Level** This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

Conclusion:

Levels have been recorded and assessments made in accordance with the relevant standards. Internal criteria's have been set and calculations made in order to determine the minimum construction details required in order to meet the desired level within the proposed residential dwellings and satisfy the local council's requirements.

The development should be designed with a 4 / 16 / 4 double glazed window and standard trickle vents.

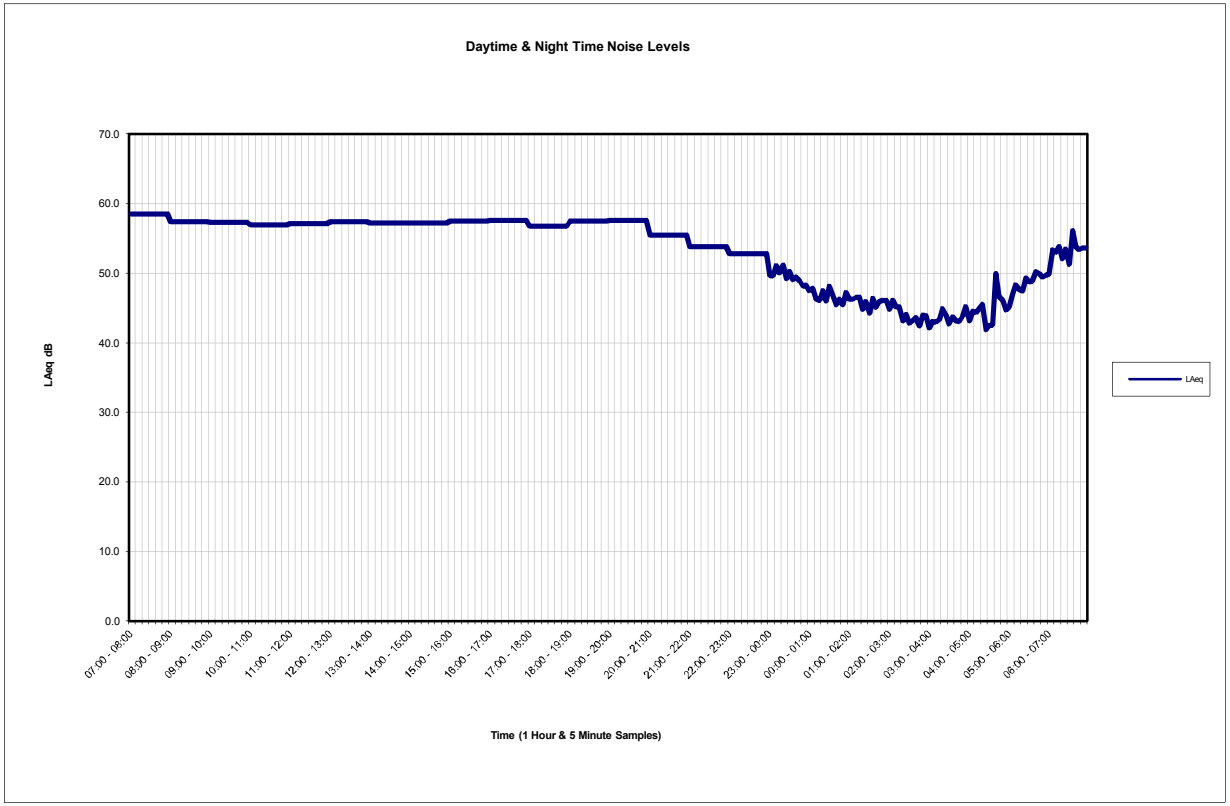
An assessment in accordance with the World Health Organisation's 'Guidelines for Community Noise' has also been carried out in order to calculate and demonstrate the predicted noise levels within outdoor living spaces. Compliance is likely to be achieved to these guidelines.

This report and subsequent calculations and assessments have demonstrated that mitigation measures can be introduced to the site in order to ensure compliance with BS 8233: 2014 for predicted internal noise levels within dwellings and the WHO guidelines for community noise for external living areas.

Section 14 of the National Planning Policy Framework 2012 suggests that planning permission should be granted unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the framework taken as a whole, or specific policies in the framework indicate the application should be restricted.

Based on the calculations and assessments made within this report it is the professional opinion of Sound Advice Acoustics Ltd that provided the remedial acoustic works proposed within this report are carried out, the proposed housing and outdoor living areas can meet the requirements of the National Planning Policy Framework 2012, NPPF & NPSE.

NOISE LEVEL SUMMARY ASSESSMENT																
Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 23:00 DAYTIME AVERAGE $L_{Aeq\ 16\ HOUR}$	57.0	72.1	53.8	58.0	56.4	55.3	61.8	62.7	55.3	51.6	53.5	54.6	45.9	39.1	42.9	28.6
23:00 - 07:00 NIGHT TIME AVERAGE $L_{Aeq\ 8\ HOUR}$	48.4	59.4	41.9	51.0	47.3	44.4	54.4	54.6	45.6	42.3	43.9	45.5	39.6	34.9	36.4	18.3



Position 1

DAYTIME NOISE LEVELS 07:00 - 23:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz)									
							31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 08:00	58.5	82.8	53.8	58.5	56.3	55.3	63.1	64.7	58.3	53.2	53.5	54.7	49.5	46.8	50.1	40.4
08:00 - 09:00	57.4	67.0	54.2	58.6	56.9	55.7	63.5	64.6	56.7	53.0	54.4	54.8	45.8	40.8	42.9	15.6
09:00 - 10:00	57.4	67.2	54.5	58.3	57.0	56.0	63.0	63.4	53.9	50.9	54.2	55.0	46.3	39.8	40.4	15.4
10:00 - 11:00	57.0	65.7	54.2	58.1	56.7	55.7	61.7	62.8	54.7	51.3	54.1	54.8	45.4	37.4	39.4	15.9
11:00 - 12:00	57.1	66.4	54.0	58.4	56.6	55.5	61.7	62.3	54.2	51.8	54.2	54.9	46.0	35.9	34.9	15.6
12:00 - 13:00	57.5	67.8	54.4	58.5	57.0	55.9	61.9	62.5	56.3	52.5	54.2	55.3	46.6	36.0	37.0	17.0
13:00 - 14:00	57.2	67.1	54.2	58.3	56.9	55.8	62.2	62.5	55.2	52.3	54.1	54.9	45.4	35.7	41.6	16.8
14:00 - 15:00	57.2	65.0	54.2	58.3	56.9	55.7	61.8	62.5	54.7	52.3	54.2	55.0	45.9	36.5	35.3	16.2
15:00 - 16:00	57.5	66.6	54.7	58.7	57.1	56.0	63.1	64.2	56.4	52.0	54.0	55.2	46.7	35.8	43.8	15.7
16:00 - 17:00	57.6	65.6	54.7	58.8	57.2	56.2	62.6	63.0	56.3	51.7	54.0	55.4	45.9	40.1	43.1	15.7
17:00 - 18:00	56.7	63.1	54.1	57.7	56.5	55.6	63.2	64.2	56.2	50.9	53.2	54.7	45.2	35.1	36.0	15.1
18:00 - 19:00	57.5	64.0	54.8	58.6	57.3	56.2	60.5	61.9	54.5	51.9	53.9	55.6	46.2	33.1	33.6	15.0
19:00 - 20:00	57.6	72.6	54.1	58.3	56.7	55.5	60.0	61.5	55.1	51.3	53.3	54.8	45.5	41.8	49.6	18.8
20:00 - 21:00	55.5	65.2	52.0	56.6	55.1	53.8	58.8	60.2	52.6	50.6	52.4	53.4	44.2	31.6	27.2	15.1
21:00 - 22:00	53.9	62.6	49.6	55.3	53.4	51.7	57.6	59.2	53.6	49.3	50.6	51.6	42.9	31.0	27.0	15.1
22:00 - 23:00	52.8	64.3	48.3	54.0	52.0	50.4	57.5	58.1	50.0	47.4	49.4	50.6	42.6	30.8	26.4	15.0

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz)									
							31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
23:00 - 00:00	49.7	58.2	45.1	51.5	49.4	46.7	57.8	57.2	51.3	47.2	46.0	47.3	39.2	25.6	20.4	15.2
	49.6	58.1	45.8	51.0	49.4	47.7	57.9	56.9	46.8	43.6	45.6	47.7	39.3	24.7	17.4	14.8
	51.1	60.9	46.4	52.4	49.9	48.1	59.7	58.8	47.9	45.4	48.3	48.7	40.7	31.0	27.7	14.9
	50.1	57.2	45.6	51.5	50.0	48.3	56.3	57.4	47.2	44.7	46.8	47.8	40.0	25.9	20.3	14.9
	51.2	64.1	43.6	53.3	49.1	46.1	55.8	60.0	48.0	44.9	48.1	48.8	41.3	29.7	20.6	14.9
	49.2	54.2	43.0	51.1	49.0	46.6	54.0	54.9	47.3	42.8	44.7	47.3	39.7	25.4	18.0	14.9
	50.3	63.1	42.3	52.0	49.4	46.9	55.6	58.1	51.1	44.3	46.9	47.7	40.8	29.1	28.2	14.9
	49.1	57.4	45.1	50.7	48.9	46.9	54.0	55.1	46.9	43.1	45.4	47.0	39.0	26.1	21.1	15.7
	49.4	61.2	42.8	51.3	48.9	45.6	52.7	53.8	46.1	46.5	46.2	47.1	38.6	25.4	20.9	14.9
	48.9	54.0	43.0	50.9	48.5	45.7	53.2	59.1	46.6	44.5	44.4	46.5	39.4	27.2	22.3	14.9
	48.1	55.3	43.8	49.9	47.5	45.6	53.6	55.2	46.3	42.4	44.0	46.1	37.8	27.2	24.5	15.0
	48.3	57.8	41.8	50.2	48.0	44.7	53.2	54.8	51.8	43.1	43.6	46.1	38.9	27.7	23.4	14.9
00:00 - 01:00	47.5	55.2	41.8	49.7	46.6	44.3	51.6	51.4	42.7	41.2	43.0	45.2	38.6	30.5	28.5	15.4
	47.9	54.4	42.0	50.3	47.4	44.6	50.4	52.0	43.2	40.6	43.0	45.7	39.4	29.8	28.2	15.4
	46.4	52.8	39.7	49.5	45.4	42.1	51.3	52.2	41.2	38.4	41.3	44.3	37.9	26.4	23.4	15.0
	46.1	53.7	38.9	48.8	45.5	41.5	51.2	52.0	42.6	38.7	40.9	43.9	37.9	25.4	21.3	15.0
	47.5	54.3	42.0	49.8	47.0	43.9	53.9	54.8	46.0	39.6	42.4	45.3	39.3	26.4	18.9	15.4
	46.0	52.5	40.8	48.6	45.3	43.1	55.4	56.3	49.5	41.4	41.6	43.6	36.5	23.0	16.4	14.8
	48.1	53.6	42.5	50.7	47.3	44.6	56.3	56.8	49.4	45.3	43.7	45.3	39.4	25.7	17.2	14.8
	46.9	52.4	41.8	49.4	46.2	43.6	53.9	55.5	45.7	40.5	42.2	44.6	38.3	24.6	16.3	14.8
	45.5	51.4	37.9	48.1	44.9	41.0	52.1	52.3	42.5	40.1	41.7	43.3	35.9	21.7	16.0	14.9
	46.3	53.6	40.4	48.6	45.8	43.4	53.8	54.4	43.9	40.3	43.5	43.7	36.3	23.7	20.3	15.0
	45.5	52.4	37.5	48.1	44.7	41.5	51.6	53.8	43.9	39.2	41.2	43.3	36.4	22.9	16.1	14.8
	47.2	53.7	39.4	49.8	46.6	43.0	53.7	56.0	47.5	42.3	43.9	44.6	37.3	23.4	16.5	15.0
01:00 - 02:00	46.3	52.3	41.1	48.6	45.7	43.2	53.7	55.1	46.6	40.8	42.4	44.1	36.6	23.7	16.9	14.8
	46.3	54.5	38.5	48.8	45.3	41.6	54.4	54.8	45.8	40.4	42.4	43.9	37.2	23.6	16.2	14.8
	46.6	51.9	38.9	48.7	46.1	43.7	53.4	53.8	42.9	40.2	42.6	44.4	37.0	23.5	16.7	15.0
	46.6	53.7	40.5	48.6	46.1	43.3	54.3	57.9	49.9	41.0	43.7	43.7	36.0	22.3	18.2	15.1

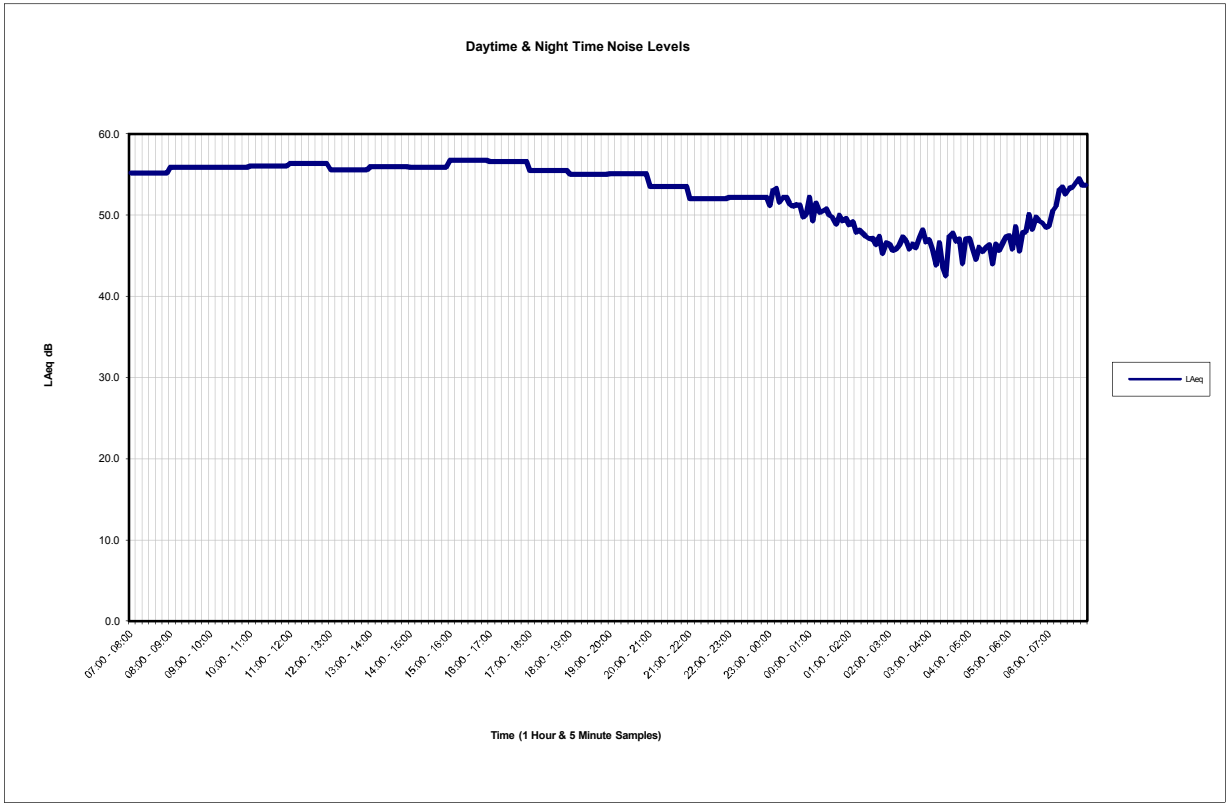
NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	44.8	51.2	35.7	47.5	44.1	40.3	50.4	52.3	42.3	40.1	41.0	42.7	34.7	20.7	15.5	15.1
	45.9	53.6	36.7	48.2	45.3	41.1	52.3	53.4	44.0	40.7	41.7	43.6	36.9	24.1	18.6	15.1
	44.3	52.8	37.1	47.1	43.3	40.6	54.0	54.3	43.4	41.1	42.1	41.7	32.2	18.5	15.0	16.1
01:00 - 02:00 *Continued*	46.4	52.0	40.9	48.9	45.6	43.3	55.5	56.3	44.8	41.9	42.7	44.2	36.3	23.7	17.8	14.9
	45.1	52.1	38.7	47.2	44.6	41.7	54.3	53.3	43.0	41.5	43.2	42.5	32.0	18.7	16.4	14.8
	45.9	53.6	37.3	48.9	44.8	40.6	53.6	54.0	43.9	40.0	41.1	43.7	37.3	23.3	16.5	14.9
	46.1	54.3	39.2	49.3	44.7	41.7	55.1	55.1	43.5	40.4	41.9	43.8	37.0	23.9	17.2	14.8
	46.1	54.9	39.0	48.7	44.4	41.0	54.0	53.3	42.8	40.6	42.1	43.7	37.1	22.4	17.1	14.9
	44.8	53.1	39.0	48.0	43.4	40.8	52.6	51.6	43.4	43.0	42.0	42.0	33.9	20.5	16.7	14.9
	46.1	55.9	37.9	49.5	44.1	39.7	53.2	57.7	51.4	40.8	40.7	43.3	37.8	25.4	18.4	14.9
	45.2	56.0	37.9	47.8	44.1	40.4	52.3	52.4	40.4	39.6	42.5	42.9	34.8	20.4	16.3	14.9
	45.2	54.0	36.6	48.3	44.3	39.8	52.1	51.7	40.0	40.1	43.0	42.5	34.8	22.2	21.3	15.7
02:00 - 03:00	43.2	55.2	33.9	46.9	41.0	36.6	52.3	51.2	39.3	37.7	40.4	40.8	32.8	20.4	19.5	15.0
	44.1	53.6	37.0	46.4	43.1	39.6	51.4	50.4	40.3	38.3	40.6	41.9	34.6	19.8	15.8	14.9
	42.8	52.7	34.2	45.9	41.6	37.4	51.5	49.9	39.3	37.5	40.1	40.3	32.7	18.6	14.7	14.8
	43.2	53.4	31.5	46.1	41.6	35.3	51.2	51.3	40.0	37.4	39.5	41.2	33.2	18.7	15.1	14.9
	43.6	51.7	32.9	46.6	42.8	36.2	52.1	51.6	40.4	36.6	40.1	41.3	34.1	20.3	15.0	14.9
	42.4	53.2	31.0	46.8	38.3	33.1	50.8	52.4	40.4	35.5	35.9	40.0	35.1	21.4	15.4	14.9
	44.0	53.8	33.8	47.9	42.0	36.9	52.0	51.7	42.2	38.0	38.8	41.7	35.8	21.4	15.2	14.9
	43.9	54.2	34.3	47.6	41.5	36.2	54.3	51.9	40.2	38.1	39.4	41.6	35.1	20.5	15.4	14.9
	42.2	49.9	32.5	45.8	40.3	34.4	52.8	51.5	39.5	37.2	37.9	39.8	33.4	19.7	15.7	14.9
	43.1	52.8	34.5	46.8	40.7	36.9	53.6	50.8	40.1	38.3	39.0	40.6	34.2	23.5	22.9	15.1
	43.0	57.1	36.7	46.1	40.9	38.7	53.7	51.5	40.2	38.7	40.0	40.1	33.5	25.3	25.5	15.3
	43.4	55.1	36.3	45.6	42.1	38.1	53.3	51.3	40.0	38.8	39.7	40.2	34.2	29.2	30.4	16.2
	44.9	56.6	38.1	47.8	41.9	39.8	53.7	52.0	41.0	38.7	41.2	41.6	36.9	29.5	30.2	16.2
03:00 - 04:00	44.1	54.6	38.5	47.3	42.3	40.1	52.8	50.7	40.1	38.9	39.2	41.1	36.1	29.6	30.3	16.2
	42.7	51.9	36.8	45.2	41.8	39.1	52.6	50.0	39.4	38.1	39.2	39.7	32.9	27.7	28.6	16.5
	43.7	55.5	35.6	46.3	41.3	37.7	54.9	51.2	41.1	38.8	39.9	40.7	35.6	24.7	22.7	15.0
	43.2	52.9	37.9	45.5	42.4	40.0	53.6	52.4	45.6	39.4	40.4	40.2	33.6	22.5	19.3	14.9
	43.1	52.6	37.9	45.9	41.6	39.0	52.9	51.0	43.0	38.3	39.1	39.9	33.9	29.0	30.2	16.3
	43.8	52.4	35.7	46.8	42.7	38.2	53.0	51.3	40.5	39.0	40.6	40.7	34.8	27.1	27.5	15.8
	45.2	64.1	37.8	47.8	44.2	40.2	53.4	51.9	40.2	38.7	39.6	41.1	37.0	34.8	36.8	18.9
	43.2	54.5	35.8	46.1	41.7	38.8	53.4	50.5	39.6	39.1	40.1	40.4	33.4	26.8	26.1	15.3
	44.6	52.8	38.2	47.3	43.5	40.0	53.4	51.9	39.8	39.5	41.5	41.9	34.8	26.3	25.0	15.2
	44.4	57.5	37.1	47.0	42.8	39.4	51.2	49.1	39.3	39.2	41.7	41.6	34.4	27.7	26.7	15.3
	44.9	59.2	37.2	48.3	42.9	39.2	52.3	51.3	38.7	38.0	42.0	42.1	35.6	28.3	27.7	15.8
04:00 - 05:00	45.6	56.8	36.3	48.5	44.0	38.3	49.9	48.1	41.9	39.4	40.0	41.8	37.6	34.5	36.2	20.0
	41.9	63.7	36.2	43.8	40.7	38.2	50.7	48.6	37.9	37.4	37.6	37.2	33.1	32.1	33.6	18.0
	42.5	52.7	37.4	44.6	41.2	38.7	51.7	48.8	37.8	37.6	38.6	39.5	33.6	28.1	27.3	15.4
	42.5	53.1	36.1	45.6	41.0	37.9	49.7	46.5	37.3	38.2	38.4	38.5	33.6	31.9	32.7	16.8
	50.0	70.0	41.3	52.7	46.9	42.7	50.2	49.2	41.1	42.8	43.5	45.1	41.6	41.2	43.4	26.2
	46.7	56.7	40.7	49.3	45.8	43.0	51.8	51.7	39.7	41.6	41.3	43.3	38.7	35.0	35.0	17.8
	46.1	55.0	40.6	48.9	45.1	42.2	53.6	51.2	40.3	40.4	41.4	42.9	37.8	33.2	33.9	17.7
	44.7	56.5	38.1	46.8	43.2	40.8	53.6	50.9	40.9	43.6	41.5	40.6	35.7	31.0	31.8	17.2
	45.2	53.1	37.4	48.3	44.0	40.3	54.7	53.0	41.1	40.3	41.7	42.6	35.3	28.7	28.9	15.9
	46.9	55.7	39.5	50.3	45.1	41.1	54.9	54.4	44.9	41.0	41.9	44.0	39.5	31.0	27.1	15.3
05:00 - 06:00	48.3	56.4	41.5	51.1	47.2	44.1	56.0	56.6	43.0	41.4	44.6	45.6	39.8	31.1	29.3	15.9
	47.7	57.2	40.7	51.0	46.3	42.5	55.3	56.2	45.7	41.4	42.8	45.0	40.1	30.6	25.9	15.1
	47.5	59.0	39.4	50.4	45.7	42.1	54.9	54.1	43.7	40.8	43.3	44.8	39.5	29.1	25.1	15.1
	49.3	62.3	41.1	50.4	45.9	43.7	55.6	53.9	41.9	43.1	47.1	46.6	39.2	29.8	26.2	15.1

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	48.8	55.2	41.9	51.1	48.4	45.2	55.2	54.3	45.4	41.8	44.1	46.4	40.4	30.6	27.0	15.1
	48.9	56.4	42.2	52.0	47.8	44.7	55.2	54.7	48.3	42.0	44.2	46.3	41.1	30.7	27.1	15.3
05:00 - 06:00 *Continued*	50.3	62.1	42.1	51.8	48.3	44.7	55.5	54.0	42.9	42.8	46.4	47.7	41.1	33.0	37.9	15.0
	50.0	58.8	42.8	52.7	48.5	46.1	56.3	55.6	45.1	43.6	46.3	47.4	41.1	32.5	30.9	16.2
	49.4	57.6	44.4	51.6	48.8	46.1	55.3	54.1	44.9	44.3	45.0	46.6	40.9	31.6	36.4	16.5
	49.7	61.5	43.6	52.5	48.4	46.1	55.6	56.8	48.3	46.1	44.4	46.3	39.9	36.6	41.5	15.5
	49.9	65.3	40.3	53.1	47.4	44.1	53.9	51.7	41.8	42.2	43.0	44.6	38.9	43.7	42.9	16.2
	53.4	66.3	44.8	56.9	50.2	47.4	57.7	56.9	49.2	46.7	51.0	50.5	43.8	36.6	36.4	15.4
	53.0	61.9	46.6	56.0	51.4	48.2	55.3	56.2	45.5	44.4	46.5	48.9	45.2	43.4	44.9	26.2
	53.8	65.2	48.1	56.1	53.2	50.4	56.5	59.1	50.7	48.8	48.1	50.1	45.6	42.5	44.1	25.7
06:00 - 07:00	52.1	58.8	47.3	54.6	51.3	49.0	57.0	57.9	50.5	46.6	45.8	49.2	44.4	39.1	38.7	20.6
	53.5	67.4	46.8	56.0	52.3	48.9	57.8	57.3	48.8	46.6	49.5	50.6	45.3	39.0	39.3	21.4
	51.3	59.4	45.4	53.6	50.5	47.9	54.1	53.9	45.8	43.8	45.4	48.6	42.8	38.1	39.3	19.9
	56.1	65.9	47.7	59.1	54.8	51.7	56.9	57.9	48.6	46.1	48.0	50.7	47.7	47.2	50.7	30.1
	53.8	61.9	47.6	56.3	53.0	50.5	57.2	56.4	48.7	45.2	46.8	49.9	46.0	43.4	46.0	27.0
	53.4	63.2	46.0	55.7	51.9	48.8	57.6	56.9	46.5	45.2	48.9	50.7	45.4	37.8	37.9	19.5
	53.7	63.0	47.0	56.2	52.6	49.5	56.6	55.8	46.5	43.7	46.7	50.3	45.3	44.0	44.3	17.9

NOISE LEVEL SUMMARY ASSESSMENT																
Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 23:00 DAYTIME AVERAGE $L_{Aeq\ 16\ HOUR}$	55.5	67.0	50.7	57.1	54.7	52.8	59.9	61.4	53.6	48.5	49.6	53.1	46.7	40.3	42.3	22.2
23:00 - 07:00 NIGHT TIME AVERAGE $L_{Aeq\ 8\ HOUR}$	49.5	58.5	43.6	51.6	48.8	46.3	52.4	53.5	44.2	42.3	45.2	47.5	39.1	31.7	33.0	14.7



Position 1

DAYTIME NOISE LEVELS 07:00 - 23:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 08:00	55.2	64.9	48.8	57.6	54.4	51.4	57.8	58.8	53.1	47.1	48.4	51.6	47.4	44.3	46.6	28.5
08:00 - 09:00	55.9	67.0	50.7	57.6	55.4	53.3	59.6	61.4	51.7	46.9	49.0	53.3	48.2	41.3	44.6	22.1
09:00 - 10:00	55.9	65.7	51.6	57.4	55.5	53.8	60.2	61.3	51.1	46.6	49.1	53.6	48.2	40.7	40.8	21.3
10:00 - 11:00	56.1	64.7	51.9	57.7	55.6	53.9	61.1	62.6	56.1	47.6	49.5	53.8	47.8	40.7	41.1	20.3
11:00 - 12:00	56.4	63.7	52.7	57.7	56.1	54.6	60.5	61.7	52.0	48.6	50.3	54.5	47.5	39.3	40.4	21.8
12:00 - 13:00	55.6	64.5	51.8	57.2	55.0	53.5	60.1	62.4	55.3	47.3	49.1	53.4	46.7	41.2	42.4	18.1
13:00 - 14:00	56.0	65.9	51.7	57.6	55.2	53.6	61.1	63.0	55.9	49.1	50.1	53.4	47.1	42.5	43.5	23.2
14:00 - 15:00	55.9	64.0	51.1	58.0	55.0	53.2	60.4	62.3	55.7	48.2	49.9	53.5	47.5	40.4	42.4	24.1
15:00 - 16:00	56.8	74.2	51.3	58.2	55.5	53.5	60.9	62.4	53.9	52.1	52.7	53.9	47.5	42.2	44.5	26.1
16:00 - 17:00	56.6	69.6	50.9	57.7	55.0	53.1	60.4	62.9	55.5	53.5	51.7	54.0	47.3	40.5	42.9	22.8
17:00 - 18:00	55.6	63.2	51.4	57.1	55.2	53.4	59.6	61.7	53.3	47.8	49.6	53.8	46.2	36.0	37.8	18.7
18:00 - 19:00	55.1	64.9	50.3	56.7	54.5	52.5	61.9	61.9	53.8	47.0	49.1	52.9	46.0	37.7	42.3	17.8
19:00 - 20:00	55.1	68.6	50.0	56.7	54.2	52.2	58.9	60.7	51.3	46.2	48.2	52.8	45.3	42.6	45.0	16.1
20:00 - 21:00	53.6	65.0	48.7	55.3	52.6	50.6	58.9	59.5	51.7	47.7	48.4	51.8	43.9	30.9	24.4	15.0
21:00 - 22:00	52.1	61.3	47.4	54.0	51.2	49.3	56.2	57.6	46.3	45.1	46.9	50.5	42.0	28.4	25.5	14.8
22:00 - 23:00	52.2	63.0	47.1	54.0	51.3	49.2	56.3	58.4	50.1	45.4	47.6	50.3	42.5	29.0	21.3	14.9

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
23:00 - 00:00	51.2	56.2	46.8	52.9	50.9	49.0	55.2	53.6	43.9	43.6	46.1	49.8	40.1	24.6	17.4	14.7
	53.1	57.8	48.2	55.1	52.7	50.1	57.3	60.4	52.4	46.5	47.3	51.7	42.4	25.8	16.2	14.7
	53.3	61.2	48.9	55.0	52.6	50.8	57.8	59.8	49.8	47.2	48.9	51.3	43.9	34.4	30.7	14.7
	51.6	56.3	47.8	53.3	51.2	49.8	54.8	55.7	43.3	44.2	46.5	50.0	41.5	25.5	16.1	14.7
	52.2	56.1	48.5	53.9	52.0	50.1	55.7	56.9	43.9	45.7	47.3	50.5	42.2	26.3	16.4	14.7
	52.2	56.0	46.7	54.1	51.9	49.5	53.8	56.3	44.2	42.8	46.0	50.8	42.7	27.3	18.0	14.7
	51.4	56.8	45.2	53.5	51.0	48.0	53.2	55.0	44.1	42.3	45.4	49.7	42.5	26.4	16.1	14.7
	51.1	55.8	46.4	53.0	50.7	48.6	53.1	54.3	44.6	44.2	46.3	49.4	41.2	24.8	15.5	14.7
	51.3	56.0	44.5	53.5	50.9	47.9	53.7	57.5	46.9	41.6	46.2	49.7	41.7	25.5	16.1	14.7
	51.3	57.1	46.8	52.9	51.1	49.4	53.1	54.8	42.5	41.6	45.7	49.8	41.9	25.2	16.1	14.7
	49.8	54.0	43.6	51.8	49.7	47.1	55.3	53.7	42.8	40.8	45.1	48.2	40.0	24.4	16.1	14.7
	50.2	56.0	44.5	52.0	50.1	47.3	53.5	54.4	44.9	40.7	44.9	48.5	40.5	24.6	16.1	14.7
00:00 - 01:00	52.2	66.2	43.2	53.4	50.2	46.6	55.4	60.9	47.8	44.1	48.7	50.0	41.9	29.7	23.0	15.2
	49.3	55.5	43.9	51.5	48.9	46.3	52.0	53.6	42.5	41.5	44.2	47.7	39.4	23.9	16.4	14.7
	51.5	59.4	43.1	53.3	51.2	48.9	53.2	54.1	43.3	46.2	48.6	49.2	41.2	25.0	17.1	14.7
	50.3	55.1	45.5	52.0	50.1	47.8	52.4	52.0	41.7	40.7	44.9	48.8	40.7	24.3	15.6	14.7
	50.6	56.8	45.0	53.2	49.5	47.0	52.1	56.3	47.2	42.5	45.5	49.0	40.2	25.1	18.1	14.7
	50.8	56.6	46.6	52.8	50.2	48.1	52.2	56.3	48.6	43.9	46.3	49.1	40.3	24.4	15.3	14.7
	50.0	62.0	42.7	52.2	49.1	45.8	53.3	53.1	44.8	41.9	44.4	48.2	41.2	26.0	16.6	14.7
	49.8	57.0	45.0	51.9	49.3	47.3	54.2	54.6	43.6	41.6	44.4	48.2	40.1	24.4	15.3	15.0
	48.9	56.7	43.4	51.5	48.0	45.6	53.1	52.9	42.4	44.3	44.7	47.0	38.3	22.6	14.7	14.7
	50.0	61.7	44.3	52.7	48.7	46.6	53.0	52.1	42.1	42.9	45.0	48.3	40.5	29.0	20.2	14.7
	49.3	56.2	43.9	50.8	49.0	47.0	50.7	52.4	41.6	43.5	45.2	47.6	38.1	23.7	17.1	14.7
	49.6	56.1	43.6	51.7	49.1	46.9	52.3	51.5	43.6	43.3	45.1	47.9	39.8	23.6	15.1	14.7
01:00 - 02:00	48.8	56.7	43.7	50.7	48.5	46.1	52.1	50.7	40.4	44.5	44.9	47.0	37.4	26.3	15.1	14.7
	49.2	55.2	42.3	51.5	48.7	45.7	53.1	52.4	42.0	41.6	45.7	47.2	39.0	29.7	15.8	14.7
	47.9	52.9	41.6	49.7	47.8	45.0	51.5	50.6	40.4	40.8	43.6	46.3	37.0	19.9	15.2	14.7
	48.2	54.4	42.2	50.4	47.8	44.7	53.2	52.7	41.3	40.7	44.8	46.2	37.5	22.4	16.1	14.7

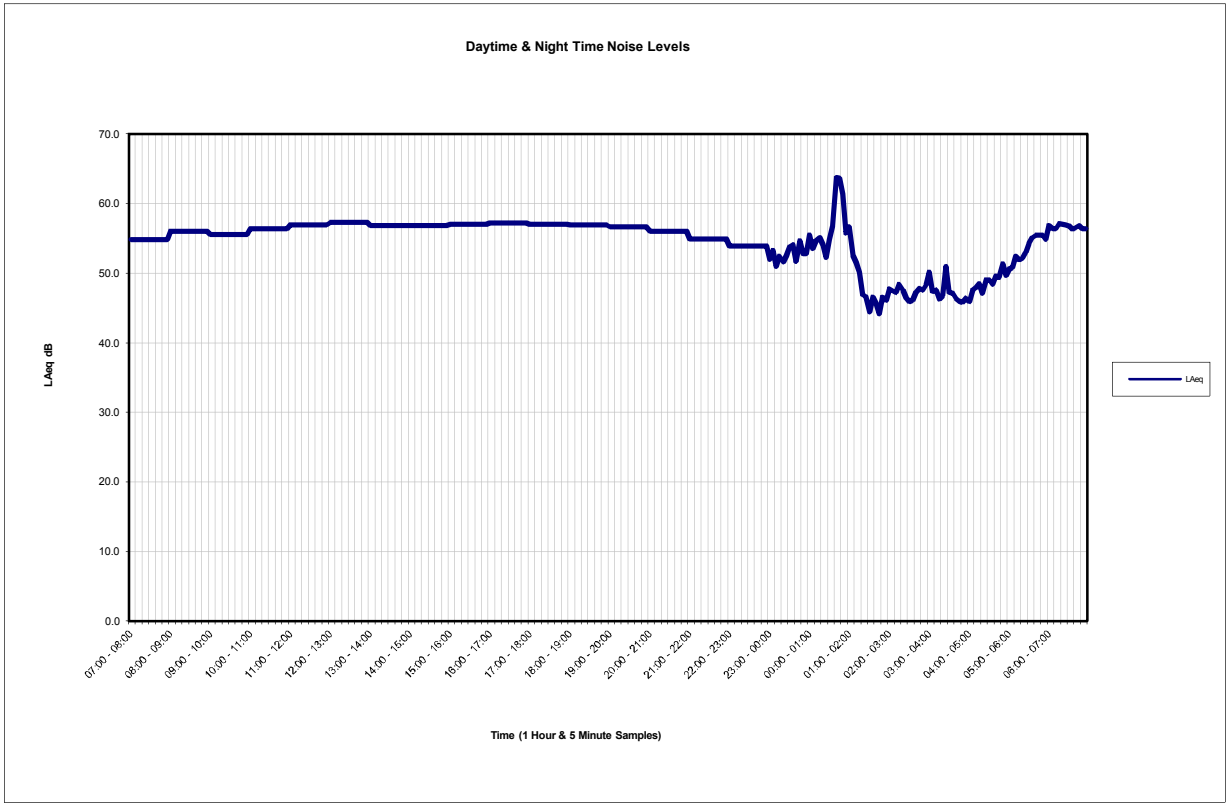
NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	47.8	55.2	39.4	50.7	47.1	42.4	52.4	53.7	41.1	38.9	43.0	45.9	38.9	23.5	15.3	14.7
	47.4	55.3	39.0	50.3	46.3	43.3	51.6	51.8	40.3	37.8	42.1	45.6	38.3	22.9	15.0	14.7
	47.1	54.2	36.3	50.7	45.5	39.0	50.2	51.2	40.2	37.5	41.3	45.3	38.4	22.8	15.1	14.7
01:00 - 02:00 *Continued*	47.2	54.5	37.0	50.6	45.9	41.2	49.3	50.6	40.8	44.3	43.0	45.1	37.2	20.7	14.4	14.7
	46.4	53.8	37.6	48.9	46.2	41.7	51.4	50.8	39.6	40.9	43.0	44.3	36.2	21.3	15.1	14.8
	47.4	52.6	41.0	49.9	46.8	44.4	51.5	51.3	40.7	39.4	42.3	45.6	38.4	23.6	16.0	14.7
	45.3	54.2	34.7	48.6	44.0	37.8	47.5	49.8	38.6	37.6	40.8	43.5	36.0	20.2	14.7	14.7
	46.6	52.9	39.2	49.5	45.6	42.2	49.6	49.2	40.0	39.7	42.5	44.7	36.7	20.5	15.0	14.7
	46.5	56.2	38.5	49.4	45.5	42.2	49.9	52.9	41.4	39.1	42.7	44.6	36.6	21.0	15.5	14.7
	45.7	53.3	37.7	48.6	44.9	40.1	50.2	49.1	40.4	39.4	41.8	44.0	34.6	18.3	14.3	14.7
	45.8	55.3	33.9	49.2	44.9	38.8	52.1	51.7	39.1	38.5	42.6	43.7	35.2	19.6	14.9	14.7
	46.3	59.9	40.7	47.9	45.2	42.7	49.5	49.3	39.2	39.3	42.1	44.7	35.2	18.6	14.4	14.7
02:00 - 03:00	47.3	54.8	39.0	50.4	46.0	42.9	48.9	49.1	39.2	38.5	42.2	45.5	38.4	22.8	15.3	14.7
	46.9	56.4	39.2	49.6	45.7	42.7	49.6	49.0	38.9	39.2	42.9	45.0	37.1	20.7	14.7	14.7
	45.8	52.3	39.3	48.0	45.2	42.1	49.3	54.1	50.7	38.2	41.8	43.6	35.4	19.7	14.9	14.7
	46.5	52.8	35.1	48.8	46.2	42.5	49.7	49.9	39.6	39.5	42.9	44.6	35.8	20.3	14.6	14.7
	46.0	53.6	40.0	48.4	45.1	42.8	50.8	48.7	39.1	38.0	41.7	44.1	36.4	20.1	14.6	14.7
	47.3	55.1	39.5	50.2	46.2	42.5	51.1	50.5	43.7	39.5	43.7	45.5	36.4	20.0	14.7	14.7
	48.2	59.4	37.3	50.7	47.9	40.5	53.8	53.9	43.4	41.1	46.3	45.9	36.4	21.5	15.0	14.7
	46.7	52.0	40.1	49.0	46.3	43.3	49.0	49.2	39.4	40.5	43.7	44.8	34.4	17.8	14.2	14.7
	47.0	54.3	40.0	49.7	46.1	43.5	50.6	50.6	40.8	38.7	43.5	45.0	36.8	21.1	15.0	14.7
	45.8	52.4	34.4	49.2	44.7	39.6	50.7	52.8	41.2	39.5	43.4	43.4	34.8	19.3	14.3	14.6
	43.9	51.8	32.6	47.6	42.1	38.0	49.2	48.8	38.2	36.8	40.1	41.9	34.0	18.3	14.9	14.6
	46.6	54.5	38.2	49.3	45.9	41.5	50.0	49.4	41.2	38.0	42.4	44.7	37.1	22.1	15.4	14.6
03:00 - 04:00	43.6	51.2	26.7	46.8	43.1	30.4	47.0	49.5	38.0	37.2	41.0	41.6	31.7	15.2	14.7	14.7
	42.5	50.8	26.5	46.1	41.0	30.6	48.9	46.6	39.1	37.1	39.5	40.5	30.1	14.8	14.2	14.6
	47.3	56.5	38.0	50.1	46.2	42.0	49.6	51.7	42.8	39.6	43.4	45.1	38.3	23.5	16.5	14.7
	47.8	55.3	38.1	50.8	46.7	41.8	49.1	50.5	40.0	41.1	44.8	45.7	37.4	21.0	14.6	14.7
	46.8	57.4	36.1	50.5	45.3	39.0	48.9	49.6	39.1	38.2	43.2	44.9	36.7	20.6	14.7	14.7
	47.1	61.2	32.3	49.7	43.3	37.4	47.3	47.9	44.5	45.0	44.1	44.4	37.0	21.1	16.5	14.7
	44.0	55.0	31.1	47.3	42.4	36.8	47.6	47.4	40.1	37.5	41.1	41.8	33.2	18.2	14.8	14.7
	47.1	53.8	39.3	49.6	46.4	42.7	53.0	52.3	39.4	40.0	45.5	44.5	34.7	19.3	14.9	14.7
	47.2	55.8	37.9	49.9	46.4	42.6	53.4	53.0	44.8	41.0	44.4	44.8	37.0	21.7	15.3	14.7
	45.8	55.8	33.3	48.5	44.9	39.5	48.7	49.5	39.6	37.9	42.2	43.7	36.3	19.7	15.0	14.7
	44.6	53.9	32.4	47.6	43.4	37.0	47.1	47.6	36.8	37.9	40.9	42.8	33.3	16.7	14.2	14.6
	46.1	53.0	33.7	49.4	45.0	40.0	49.7	51.0	38.9	38.9	43.2	43.8	35.8	19.5	14.9	14.7
04:00 - 05:00	45.5	55.2	39.1	47.8	44.6	42.4	50.6	47.7	38.3	38.2	42.2	43.6	34.2	17.0	14.5	14.7
	46.1	52.7	37.5	48.7	45.5	42.0	50.6	49.8	38.4	38.5	43.6	43.9	35.3	19.0	14.2	14.7
	46.4	56.5	37.7	48.9	45.2	41.4	50.6	51.6	39.4	38.4	43.0	44.3	36.3	20.8	14.9	14.7
	44.0	51.3	36.6	46.0	43.5	40.4	49.3	47.0	37.2	37.6	42.2	41.8	30.2	13.9	14.6	14.7
	46.5	54.3	34.6	50.2	45.0	41.1	48.8	48.1	38.0	38.1	42.9	44.8	35.3	17.9	15.5	14.7
	45.7	56.7	37.6	47.9	44.7	41.9	49.3	47.7	38.9	37.9	41.4	44.1	34.9	19.1	15.5	14.7
	46.6	65.2	35.6	49.3	45.9	41.7	49.2	49.1	41.4	40.2	43.7	44.5	35.8	23.6	19.0	14.8
	47.3	55.4	35.0	49.9	46.9	39.6	49.2	51.2	40.9	39.3	43.8	45.5	36.4	22.0	16.3	14.6
	47.5	59.8	33.3	50.3	45.8	38.0	48.0	52.6	44.5	45.6	47.2	43.8	34.7	19.8	15.0	14.7
	45.8	54.7	39.8	47.6	45.2	42.6	52.1	52.2	44.5	41.8	43.4	43.4	34.4	18.8	14.5	14.7
05:00 - 06:00	48.6	55.5	39.3	51.6	47.5	43.7	52.0	52.6	42.4	39.6	45.4	46.6	37.7	22.3	14.6	14.6
	45.6	54.1	38.2	48.0	44.5	41.1	48.9	48.2	40.8	37.9	41.3	43.8	35.5	19.3	14.9	14.7
	47.9	56.1	42.2	50.0	47.4	44.8	54.0	54.3	52.2	44.9	44.7	45.7	35.3	18.3	15.3	14.7
	48.0	56.8	40.9	50.0	47.3	45.0	51.1	51.3	40.7	39.5	44.0	46.3	37.5	22.3	18.2	14.7

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	50.1	55.4	45.0	52.2	49.7	47.3	53.7	56.4	43.9	43.3	46.6	48.1	39.7	25.4	17.9	14.6
	48.3	57.3	42.8	50.5	47.5	45.1	50.8	49.7	41.9	41.9	44.0	46.5	38.2	21.2	16.6	14.6
05:00 - 06:00 *Continued*	49.8	56.8	45.3	52.0	49.1	47.3	52.7	53.2	43.3	41.4	45.9	47.9	39.9	24.5	22.6	14.7
	49.3	55.8	43.6	51.6	48.7	45.9	52.3	53.2	41.2	41.6	45.7	47.4	39.0	28.1	24.8	14.7
	49.1	55.5	43.0	51.1	48.7	46.2	53.3	55.9	42.0	42.4	45.0	47.1	39.4	28.5	25.9	14.6
	48.5	58.8	40.2	51.2	47.3	44.2	51.2	53.2	40.8	39.7	44.2	46.0	37.3	36.0	37.1	14.8
	48.7	59.2	43.0	50.7	48.2	45.8	51.9	52.2	43.7	41.6	44.8	46.3	37.5	30.9	38.7	14.9
	50.6	59.8	45.5	52.4	49.9	48.0	50.8	52.2	41.1	40.1	44.9	48.2	40.0	39.8	39.6	14.9
	51.1	56.2	46.6	52.9	50.8	48.9	54.4	54.9	44.4	46.3	47.5	48.9	40.1	34.7	34.3	14.7
	53.1	61.2	47.8	55.0	52.6	50.3	52.6	55.6	44.1	43.5	47.6	50.7	43.1	39.3	43.3	14.7
06:00 - 07:00	53.5	64.1	48.2	55.5	52.6	50.6	54.8	54.3	45.0	45.6	48.4	51.0	42.5	39.3	44.7	14.8
	52.6	64.0	47.8	53.9	52.2	50.3	54.0	53.9	47.1	45.0	47.7	50.3	41.2	39.6	42.9	15.1
	53.3	63.6	49.6	55.0	52.8	51.4	53.9	57.5	47.1	45.5	48.9	51.2	43.0	39.0	39.4	14.9
	53.5	63.0	48.1	55.0	53.3	50.8	54.2	55.2	50.5	47.6	49.0	51.2	42.4	40.4	41.4	14.8
	54.0	62.2	49.7	56.0	53.4	51.9	56.4	55.7	47.4	46.3	48.9	51.5	43.6	43.4	41.5	15.1
	54.5	68.4	49.6	56.0	53.7	52.1	55.1	54.5	47.3	46.3	49.8	51.7	43.0	43.2	45.4	15.2
	53.7	64.5	49.5	55.0	53.1	51.2	56.7	56.8	50.1	46.5	49.4	51.6	43.1	39.0	37.1	14.8

NOISE LEVEL SUMMARY ASSESSMENT																
Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 23:00 DAYTIME AVERAGE $L_{Aeq\ 16\ HOUR}$	56.4	66.3	53.0	57.7	55.9	54.6	59.2	60.0	53.6	50.8	52.6	54.3	45.7	38.3	40.7	15.6
23:00 - 07:00 NIGHT TIME AVERAGE $L_{Aeq\ 8\ HOUR}$	53.9	61.7	49.5	55.7	53.5	51.5	55.8	56.1	47.5	44.7	47.5	49.5	45.2	44.5	46.8	30.0



Position 1

DAYTIME NOISE LEVELS 07:00 - 23:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 08:00	54.8	67.6	50.7	56.2	53.9	52.5	55.8	56.9	49.6	48.6	50.3	51.9	43.6	43.5	45.4	16.6
08:00 - 09:00	56.1	66.7	51.8	57.9	55.0	53.6	57.7	59.4	54.5	52.2	52.5	53.0	45.4	42.4	45.3	15.8
09:00 - 10:00	55.6	64.3	52.7	56.7	55.2	54.2	58.5	59.7	52.0	50.8	51.4	53.2	45.4	40.4	40.2	15.2
10:00 - 11:00	56.4	65.5	53.3	57.5	55.7	54.7	61.3	61.1	55.5	52.1	52.5	54.0	45.8	37.9	42.3	15.5
11:00 - 12:00	57.0	64.9	53.8	58.4	56.5	55.3	60.1	61.3	55.0	50.6	53.0	55.0	46.0	38.4	42.6	15.5
12:00 - 13:00	57.3	67.6	54.2	58.3	56.7	55.7	60.4	61.8	54.7	50.5	53.0	55.2	47.5	38.4	41.8	15.2
13:00 - 14:00	56.8	67.6	53.0	58.1	55.7	54.6	60.5	61.8	53.2	50.6	53.3	54.6	46.7	35.7	39.5	16.0
14:00 - 15:00	56.8	64.2	53.9	58.0	56.5	55.5	59.7	61.0	55.3	50.7	52.9	54.9	46.1	36.5	38.9	15.4
15:00 - 16:00	57.1	66.2	53.8	58.3	56.5	55.3	59.8	61.2	53.6	51.5	53.0	54.9	47.6	37.6	36.0	15.4
16:00 - 17:00	57.3	65.6	54.1	58.5	56.7	55.6	62.9	60.8	55.6	52.7	53.7	55.2	46.2	34.0	33.8	15.3
17:00 - 18:00	57.1	63.7	54.1	58.2	56.8	55.7	58.5	60.4	54.5	51.3	53.3	55.2	45.9	32.1	32.6	15.1
18:00 - 19:00	57.0	64.6	53.8	58.1	56.7	55.4	58.3	59.8	54.2	51.8	53.2	55.0	45.8	34.9	36.7	15.2
19:00 - 20:00	56.7	71.6	53.4	57.6	56.1	55.0	57.4	59.3	53.5	50.5	52.6	54.5	45.3	40.9	44.1	17.4
20:00 - 21:00	56.1	62.8	52.5	57.4	55.8	54.3	57.0	58.4	51.2	50.1	52.9	54.2	44.5	30.4	27.3	15.2
21:00 - 22:00	55.0	65.3	50.9	56.3	54.7	53.1	55.3	56.7	50.4	48.6	51.8	53.1	43.6	28.8	24.3	15.1
22:00 - 23:00	53.9	61.3	49.2	55.6	53.6	51.7	55.8	55.9	47.1	47.4	50.7	52.1	42.3	31.6	26.6	15.0

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
23:00 - 00:00	52.0	60.5	46.8	54.1	51.2	49.1	54.4	56.6	47.8	47.4	49.5	49.7	40.4	28.2	19.0	14.8
	53.3	62.8	45.7	55.6	52.4	49.8	55.9	61.4	51.9	50.0	50.5	50.9	41.6	26.9	19.9	15.1
	51.0	56.0	44.4	52.9	50.7	48.7	54.4	54.0	48.2	45.6	47.3	49.3	39.2	25.6	23.6	15.0
	52.5	59.3	47.4	55.0	51.6	49.5	53.6	56.7	48.9	46.4	49.8	50.3	40.9	32.1	32.6	17.0
	51.6	58.5	45.2	53.6	51.4	48.1	50.3	50.6	44.9	44.4	47.2	49.3	41.0	38.0	39.6	21.2
	52.6	57.4	47.4	54.5	52.2	49.9	50.6	53.8	43.0	43.8	47.3	49.8	43.0	40.7	42.3	23.4
	53.8	61.1	50.9	55.0	53.8	52.2	51.0	53.7	44.3	44.1	47.4	49.1	45.2	45.3	47.0	28.0
	54.1	60.2	50.6	55.4	53.9	52.3	51.0	51.6	41.8	43.2	46.4	48.6	45.8	46.3	48.0	29.3
	51.7	57.7	47.6	53.6	51.2	49.2	51.5	53.9	43.9	43.5	46.1	48.3	42.8	40.8	42.7	25.0
	54.7	59.3	52.4	55.5	54.6	53.7	56.6	55.6	46.7	44.4	46.8	48.9	46.6	47.0	48.7	30.5
	52.8	59.9	49.9	54.3	52.5	51.3	53.5	52.2	42.9	43.4	45.7	48.6	44.3	43.8	45.7	28.2
	52.8	59.0	48.3	54.4	52.7	50.4	54.0	51.0	46.4	43.7	46.4	48.1	44.0	44.1	46.1	28.0
00:00 - 01:00	55.5	67.8	51.8	56.1	54.2	53.1	55.1	60.3	46.4	45.6	50.1	50.7	46.7	46.6	48.5	30.8
	53.6	65.2	48.8	54.6	52.7	50.5	56.9	59.5	46.1	44.4	47.8	49.5	45.0	43.9	45.8	29.2
	54.7	63.4	50.5	56.3	54.6	52.3	53.9	53.8	42.5	44.6	47.6	48.4	46.4	47.1	49.2	32.5
	55.1	63.8	50.9	56.3	55.2	53.1	51.9	51.7	41.6	43.5	47.8	48.1	46.8	47.9	50.1	33.7
	54.1	63.9	50.8	55.5	53.9	52.5	51.8	53.9	46.6	48.1	48.3	47.8	45.1	46.2	48.5	32.3
	52.3	60.2	48.6	53.7	52.1	50.8	51.3	53.6	46.2	44.2	45.9	46.3	43.5	44.4	46.8	30.9
	54.9	60.5	50.0	56.8	54.5	52.2	50.8	52.3	41.9	41.6	45.8	46.9	46.6	48.1	50.4	33.8
	56.8	63.0	51.2	59.2	55.9	53.5	49.6	48.0	40.9	41.8	45.3	47.4	48.7	50.4	52.7	36.1
	63.8	69.5	56.4	67.1	63.6	57.8	54.5	55.3	43.9	45.9	50.5	53.6	55.9	57.7	59.9	43.3
	63.7	68.0	59.9	65.5	63.3	61.8	50.4	53.1	44.0	46.0	50.2	53.2	55.6	57.5	59.9	43.3
	61.4	66.2	57.5	62.9	61.1	59.8	47.7	50.0	44.8	44.6	48.0	50.8	53.1	55.3	57.8	41.2
	55.8	66.4	49.8	58.3	54.8	52.3	51.4	52.3	41.9	44.1	47.5	48.2	47.0	48.9	51.4	35.3
01:00 - 02:00	56.7	66.6	50.0	58.8	56.5	53.4	51.7	52.4	40.5	44.7	48.3	49.4	48.2	49.6	52.0	35.2
	52.6	60.2	48.3	54.3	52.3	50.1	49.6	53.4	43.7	43.0	46.3	47.1	43.5	44.3	46.9	31.1
	51.5	63.2	45.6	53.3	51.2	47.9	54.8	56.7	42.7	42.7	45.6	47.1	42.4	41.9	44.7	28.9
	50.2	58.3	45.8	52.5	49.3	47.5	50.1	52.7	39.7	39.6	42.6	44.8	41.3	42.0	44.6	28.2

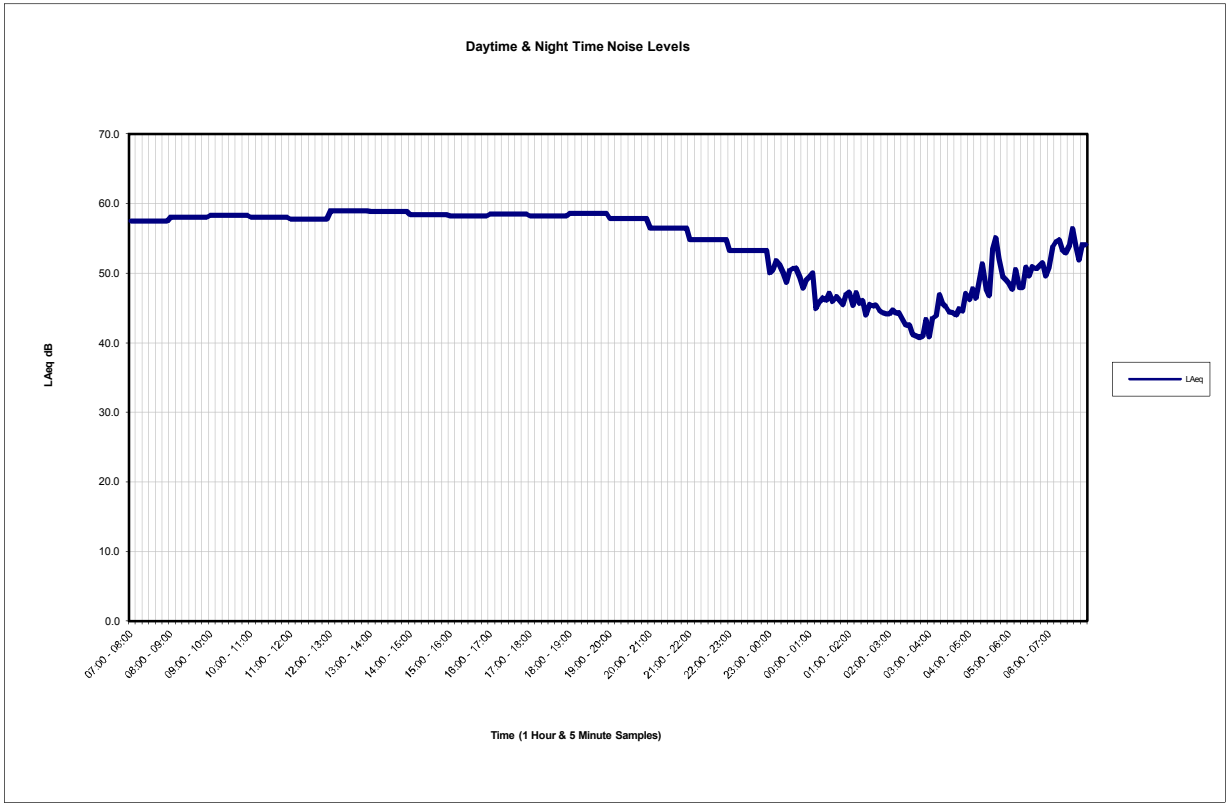
NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	46.9	60.9	40.7	49.7	45.6	43.5	50.5	50.0	40.6	38.9	38.9	40.4	38.1	39.2	41.8	25.6
	46.7	55.7	40.8	48.7	46.3	43.6	51.1	50.8	41.8	42.1	42.4	42.9	36.8	35.4	37.9	23.9
	44.5	58.2	38.5	46.6	43.9	41.3	52.9	52.2	43.1	40.6	38.7	39.9	35.5	34.8	37.2	21.6
01:00 - 02:00 *Continued*	46.6	58.0	40.2	49.2	45.4	42.8	54.1	52.5	44.0	40.7	40.8	43.1	38.3	34.5	36.9	21.4
	45.7	55.4	40.1	47.9	45.0	42.6	55.0	52.6	43.2	40.7	40.8	42.3	36.7	33.3	35.6	20.2
	44.2	54.7	38.1	46.5	43.8	40.3	51.0	49.6	41.2	38.7	38.8	40.5	34.6	33.6	36.1	19.9
	46.6	54.5	40.9	49.1	46.0	43.1	53.0	52.1	42.3	39.5	41.4	43.1	37.9	35.1	37.3	20.9
	46.1	58.0	39.5	48.7	45.0	42.4	53.0	51.6	43.0	40.1	41.2	42.3	37.5	34.3	36.8	20.4
	47.8	57.1	41.5	49.8	47.5	44.6	54.6	51.9	43.6	39.8	42.9	42.3	38.7	39.0	41.4	24.1
	47.5	57.4	41.2	49.8	46.4	43.9	53.0	51.4	43.7	39.3	41.7	42.9	38.8	37.9	40.3	23.9
	47.2	57.5	41.6	48.9	47.1	44.4	53.3	52.5	43.4	38.6	39.9	42.0	38.6	38.7	41.1	24.0
	48.4	59.7	43.1	49.9	48.1	46.0	54.0	52.7	43.7	41.4	40.6	41.9	39.6	40.7	43.1	26.1
02:00 - 03:00	47.6	64.9	42.7	49.5	46.9	45.3	54.4	52.9	43.4	41.8	39.6	41.0	39.0	39.8	42.4	25.4
	46.5	56.1	42.2	48.3	45.9	44.4	54.3	52.9	44.0	40.6	41.3	41.6	36.9	37.0	39.8	23.6
	45.9	61.4	40.9	48.2	45.1	42.8	55.8	53.2	43.3	39.2	40.6	41.4	36.4	36.2	38.8	23.0
	46.1	54.9	39.7	47.9	45.7	43.9	56.9	56.5	44.2	40.9	42.3	42.1	36.0	34.8	37.5	22.2
	47.2	56.6	41.7	49.5	46.2	44.0	57.3	57.6	45.6	40.5	42.3	43.9	38.2	34.5	36.9	20.9
	47.9	56.3	42.4	50.5	47.2	44.8	56.1	55.8	44.2	40.5	43.9	44.9	38.1	34.8	37.6	21.6
	47.6	56.1	41.9	50.0	46.6	44.4	56.0	54.6	43.7	39.7	42.1	44.3	39.6	35.0	37.1	21.0
	48.3	59.0	37.7	51.1	47.8	40.4	57.8	54.7	44.7	42.6	45.5	43.9	38.2	37.4	39.6	22.6
	50.2	58.3	42.1	52.2	50.3	45.7	57.5	54.3	45.6	39.7	43.0	43.7	41.6	42.8	44.9	27.0
	47.4	56.3	42.6	49.7	46.8	45.0	59.1	53.7	44.2	40.0	42.8	43.4	38.2	36.8	39.3	22.8
	47.6	57.8	40.7	49.6	46.6	43.9	57.2	53.2	45.0	40.4	43.3	44.0	38.6	35.8	38.1	22.3
	46.3	54.5	40.8	48.9	45.2	42.8	54.8	52.0	43.1	38.7	41.5	42.9	37.2	34.4	36.8	21.5
	46.8	59.7	41.3	48.5	46.2	43.9	53.4	52.3	43.9	39.6	41.6	43.5	37.8	35.0	37.3	22.3
03:00 - 04:00	51.0	57.6	45.6	53.9	49.5	47.8	55.5	52.7	42.5	40.1	43.5	44.5	42.5	43.5	45.8	28.0
	47.3	55.5	42.8	49.0	46.9	45.1	54.6	52.0	41.7	40.0	42.4	43.2	37.8	37.3	40.0	23.9
	47.1	55.4	41.3	49.3	46.3	43.5	52.8	52.0	41.7	39.4	41.4	43.8	37.9	36.0	38.6	22.7
	46.4	57.6	39.9	48.5	45.8	42.8	53.6	52.5	41.4	42.1	42.3	42.6	36.1	35.0	37.5	21.7
	46.0	53.6	41.1	47.6	45.7	43.6	52.6	52.4	40.8	39.9	42.1	42.5	35.6	34.2	36.8	21.4
	45.8	56.9	40.4	47.8	45.4	43.2	53.5	52.0	41.3	38.3	41.9	42.4	35.7	33.9	36.6	20.5
	46.4	53.5	39.7	48.7	46.0	42.7	53.6	52.7	41.8	38.4	42.9	43.1	36.6	33.5	35.9	20.0
	45.9	54.0	38.1	48.5	45.0	41.8	52.9	52.1	42.1	38.3	40.8	42.8	37.0	33.6	35.9	20.2
	47.6	56.3	40.7	49.7	47.1	44.5	54.9	53.4	42.0	39.8	44.3	44.7	37.6	33.2	35.5	19.6
	48.0	55.5	41.6	50.0	47.7	44.5	53.4	53.1	42.9	41.1	44.7	45.3	38.2	32.6	34.8	19.5
	48.5	55.2	42.9	50.3	48.4	46.0	53.6	52.8	42.0	41.2	45.0	46.0	38.7	32.2	34.5	19.6
	47.1	53.1	41.7	49.1	46.7	44.5	54.0	51.8	41.6	40.2	43.6	44.2	37.4	32.4	34.5	19.2
04:00 - 05:00	49.1	56.4	41.0	51.5	48.6	45.1	55.3	56.7	45.2	41.3	45.7	46.5	39.2	31.8	33.8	18.6
	49.1	57.2	42.6	51.0	48.6	46.3	56.9	54.2	42.8	40.4	45.4	46.7	39.6	32.0	33.8	19.0
	48.4	57.7	42.7	50.8	47.8	45.5	56.7	53.7	41.7	39.8	44.1	46.2	38.5	31.1	34.0	18.8
	49.6	56.5	43.0	51.9	49.3	45.0	56.3	54.0	42.1	39.8	45.3	47.5	39.9	31.3	33.3	18.6
	49.4	56.9	41.6	51.8	48.8	46.2	55.7	53.3	41.3	40.4	44.6	47.5	39.5	30.8	32.9	18.1
	51.4	57.3	46.1	53.1	51.3	48.8	56.8	55.2	43.8	43.3	47.9	49.2	41.4	31.5	33.1	18.3
	49.7	55.7	44.4	51.8	49.2	46.8	56.1	53.6	42.8	41.5	45.7	47.4	40.2	31.4	33.0	19.7
	50.6	56.3	44.1	52.8	50.1	48.0	55.5	52.7	43.8	42.9	46.8	48.5	40.8	30.7	32.4	17.9
	50.8	60.1	46.1	52.9	50.2	48.1	55.4	55.3	45.2	41.6	46.3	48.9	41.2	31.0	32.5	17.7
05:00 - 06:00	52.5	61.2	48.4	54.2	51.6	50.0	57.7	56.6	46.8	45.3	49.2	50.3	42.5	31.6	32.2	17.8
	51.9	57.1	47.2	53.2	51.8	49.8	56.0	55.3	45.0	42.4	47.8	49.7	42.7	31.7	32.2	18.0
	52.2	58.2	46.5	53.9	52.1	49.8	55.8	56.6	45.0	42.9	47.3	50.2	43.5	32.0	32.4	17.5
	53.0	57.1	49.3	54.7	52.6	50.9	56.8	57.5	45.9	43.4	48.2	51.0	44.1	31.8	32.4	17.9

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	54.3	57.9	50.9	55.6	54.1	53.1	56.2	56.6	46.9	45.7	49.9	52.3	45.2	32.6	32.2	17.6
	55.1	59.3	50.9	56.9	54.7	53.0	57.3	57.3	47.0	46.1	50.0	53.1	46.6	33.3	32.1	17.7
05:00 - 06:00 *Continued*	55.5	61.1	51.6	57.0	55.2	53.5	56.4	56.8	46.3	47.0	51.3	53.5	46.1	33.0	32.5	18.2
	55.5	60.4	51.7	56.9	55.3	53.8	57.1	57.4	47.9	47.1	51.6	53.4	45.9	32.9	31.8	17.3
	55.5	60.1	52.5	56.6	55.4	54.3	56.9	57.5	51.9	47.7	51.5	53.3	45.8	36.8	38.1	20.7
	54.9	60.1	51.0	56.5	54.8	52.8	57.0	57.0	47.2	46.2	50.4	52.8	45.6	36.5	38.8	20.8
	56.9	68.5	52.7	58.5	56.2	54.5	58.0	58.6	47.8	47.4	52.3	54.3	48.4	43.3	42.5	19.5
	56.4	63.2	51.7	58.0	56.1	54.6	58.5	58.8	51.8	48.5	52.0	54.2	47.6	36.0	37.0	18.4
	56.4	59.7	53.5	57.6	56.3	54.9	58.6	58.9	48.6	48.4	51.3	54.3	47.5	37.1	38.0	18.5
	57.2	65.7	53.9	58.3	57.0	55.8	58.4	60.1	51.5	47.7	51.6	54.8	48.3	42.2	45.1	18.5
06:00 - 07:00	57.1	70.4	53.3	58.2	56.6	55.3	59.7	62.4	56.9	47.9	51.3	54.1	47.9	44.3	48.1	19.4
	57.0	65.7	53.5	58.2	56.7	55.3	59.2	60.0	55.9	48.7	51.8	54.5	48.5	40.4	44.5	20.1
	56.8	62.5	52.8	58.1	56.6	54.9	61.0	60.6	53.2	48.0	51.3	54.6	48.6	37.6	39.8	19.3
	56.3	60.0	53.9	57.4	56.1	55.1	59.4	60.6	50.7	47.5	50.6	54.1	48.3	38.8	38.9	18.9
	56.6	60.6	53.6	57.7	56.6	55.2	59.0	60.8	51.7	47.9	50.4	54.4	48.7	38.5	39.7	18.8
	56.9	60.8	53.4	58.2	56.9	55.1	60.5	62.2	53.9	49.7	51.1	54.6	49.0	37.7	40.6	18.6
	56.4	61.4	53.3	57.4	56.3	55.2	60.1	62.6	54.3	49.6	50.3	53.9	48.3	39.3	43.6	18.6

NOISE LEVEL SUMMARY ASSESSMENT																
Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 23:00 DAYTIME AVERAGE $L_{Aeq\ 16\ HOUR}$	57.9	63.1	54.9	59.4	57.4	55.9	59.7	60.3	54.6	50.0	52.0	55.6	47.6	46.0	44.5	24.2
23:00 - 07:00 NIGHT TIME AVERAGE $L_{Aeq\ 8\ HOUR}$	49.4	57.0	43.8	52.1	48.3	45.4	53.6	52.4	45.2	41.0	41.9	45.1	40.7	42.2	40.1	20.2



Position 2

EXTERNAL NOISE ASSESSMENT
Blundell Lane, Bursledon

DOWNLOADED RESULTS
RECORDED 11th - 12th September 2015

DAYTIME NOISE LEVELS 07:00 - 23:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 08:00	57.5	67.2	53.9	58.9	56.1	54.6	61.5	63.1	56.8	51.5	51.4	54.2	47.6	48.1	47.4	25.0
08:00 - 09:00	58.1	63.7	54.9	59.5	57.7	56.1	61.1	62.5	55.8	51.8	52.8	56.0	47.6	44.1	43.4	21.0
09:00 - 10:00	58.3	65.3	55.4	59.9	57.8	56.3	60.8	60.8	53.6	49.0	52.3	55.9	47.8	48.0	45.8	24.5
10:00 - 11:00	58.0	62.0	55.3	59.6	57.8	56.2	59.6	59.9	54.1	49.5	52.3	55.8	47.8	46.2	44.4	25.0
11:00 - 12:00	57.8	62.9	54.7	59.3	57.3	55.8	59.6	59.7	53.3	50.1	52.2	55.4	47.6	46.3	44.7	25.3
12:00 - 13:00	59.0	64.6	55.4	61.0	58.4	56.5	60.3	60.1	55.6	51.0	52.6	56.2	49.0	49.2	48.3	28.2
13:00 - 14:00	58.9	63.5	55.5	60.8	58.4	56.6	60.5	60.1	55.2	50.9	52.6	56.1	49.0	49.5	47.7	28.2
14:00 - 15:00	58.5	62.0	55.6	60.2	58.1	56.6	60.2	60.3	53.7	50.2	52.4	56.1	48.3	47.6	45.7	26.1
15:00 - 16:00	58.2	61.8	55.6	59.6	57.9	56.7	60.3	60.4	54.6	49.9	52.3	56.1	48.2	45.5	43.7	23.9
16:00 - 17:00	58.5	61.6	56.3	59.9	58.2	57.1	60.6	61.1	57.3	50.3	52.6	56.7	48.3	43.5	41.5	21.9
17:00 - 18:00	58.3	61.7	55.8	59.6	58.0	56.8	60.4	61.3	54.8	49.6	52.3	56.5	47.9	43.3	41.2	22.5
18:00 - 19:00	58.6	61.6	56.2	59.9	58.4	57.1	58.2	59.3	54.1	50.3	52.8	57.0	48.1	41.5	39.0	19.2
19:00 - 20:00	57.9	63.7	55.0	59.3	57.4	56.0	58.1	58.8	54.5	49.5	52.0	55.9	46.9	45.4	44.7	21.8
20:00 - 21:00	56.5	62.8	53.4	58.1	56.2	54.5	57.7	58.1	52.8	49.2	51.2	54.7	45.8	41.4	39.0	19.3
21:00 - 22:00	54.9	59.4	51.2	56.7	54.5	52.7	56.9	57.2	52.8	47.7	49.4	52.8	44.5	41.6	39.5	19.9
22:00 - 23:00	53.3	58.1	49.3	55.3	52.7	50.7	56.3	55.9	49.0	46.0	47.7	51.2	43.0	40.1	38.1	18.6

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
23:00 - 00:00	50.1	55.1	45.5	52.3	49.5	47.6	58.0	54.5	47.2	42.1	44.2	48.2	40.3	36.1	33.1	13.9
	50.5	54.9	47.7	52.2	49.9	48.4	57.6	55.0	46.6	42.9	45.5	48.5	40.2	35.0	32.2	13.8
	51.8	58.7	47.3	53.8	51.5	49.0	57.4	56.4	47.2	44.0	46.6	49.3	42.6	39.6	37.8	18.8
	51.3	56.2	45.9	53.8	50.5	47.7	54.8	55.7	46.3	43.5	46.2	49.6	40.9	34.6	31.1	12.7
	50.1	56.7	45.1	52.3	49.4	46.9	53.6	53.1	44.9	41.5	44.1	48.3	40.1	35.0	32.2	13.8
	48.7	53.3	44.3	50.8	48.2	45.9	53.2	52.7	45.0	40.5	42.9	46.7	38.8	35.4	33.4	14.9
	50.4	54.6	46.5	52.2	49.9	47.9	54.5	55.2	48.0	42.6	45.4	48.2	40.2	36.4	34.4	15.8
	50.7	60.9	45.6	52.7	49.8	47.4	51.4	52.3	46.3	47.2	45.2	47.4	40.7	41.1	39.0	18.9
	50.7	57.0	44.2	52.8	50.0	47.2	52.5	52.3	45.1	41.6	44.1	48.3	41.2	39.9	37.5	17.8
	49.4	52.6	45.1	51.7	48.9	46.3	52.4	55.7	46.5	43.4	43.0	46.2	39.9	40.0	37.7	17.9
	47.9	51.9	44.9	49.6	47.5	45.9	52.6	51.8	45.8	41.2	42.0	45.8	38.1	34.8	32.0	13.3
	49.1	56.3	43.9	51.0	48.5	45.2	51.9	51.8	46.9	40.9	42.1	45.7	39.8	40.5	38.3	18.3
00:00 - 01:00	49.5	53.4	44.0	51.3	49.3	46.2	50.1	50.7	43.3	40.3	41.6	45.6	40.5	41.9	40.0	19.9
	50.1	55.5	41.2	53.7	48.7	43.8	50.2	49.6	43.9	40.3	40.8	44.9	41.1	44.0	42.3	22.2
	44.9	49.8	39.4	46.9	44.4	41.6	51.0	50.1	42.0	36.2	38.8	42.9	36.2	27.6	24.3	11.1
	45.9	49.6	40.4	47.8	45.5	43.2	51.4	51.8	42.8	37.4	39.9	44.0	37.2	26.2	22.4	10.9
	46.5	50.4	40.1	48.2	46.4	44.0	54.2	53.7	45.0	38.5	41.2	44.7	37.0	25.2	20.0	11.8
	46.1	50.1	41.1	47.9	45.8	43.4	55.5	53.3	46.9	40.7	40.3	44.2	36.5	24.7	18.9	13.3
	47.1	53.3	41.5	49.7	46.2	42.7	55.7	54.2	45.9	42.3	42.3	44.9	37.3	29.3	26.0	12.2
	45.9	51.6	40.6	48.2	45.3	42.3	52.4	51.4	42.2	37.5	40.0	44.2	36.6	24.2	18.9	12.2
	46.7	52.2	37.9	49.0	46.3	43.0	53.6	53.5	44.4	39.4	42.4	44.8	36.6	23.4	16.6	11.4
	46.1	51.3	40.7	48.6	45.2	42.3	51.6	51.8	42.4	37.9	41.5	44.2	35.9	23.1	16.2	11.5
	45.5	51.8	37.5	48.1	44.7	40.5	52.8	53.2	47.1	39.3	40.4	43.5	35.6	24.0	19.3	12.6
	46.9	53.4	40.4	49.7	45.6	42.8	53.5	53.2	47.4	39.6	42.5	45.0	36.3	24.9	20.6	11.2
01:00 - 02:00	47.3	53.4	42.3	49.7	46.4	43.7	54.1	52.5	45.4	40.0	42.8	45.4	36.6	25.3	20.8	11.9
	45.4	54.4	39.7	48.0	44.2	41.0	52.6	50.9	42.2	38.1	40.3	43.7	34.9	24.1	20.0	11.8
	47.2	52.3	41.7	49.8	46.3	43.0	53.4	52.6	44.1	39.8	43.1	45.2	36.6	24.2	17.6	10.6
	45.7	51.6	36.2	48.6	45.0	40.5	52.5	53.1	45.0	38.6	40.8	43.8	35.7	25.8	21.4	11.5

Position 2

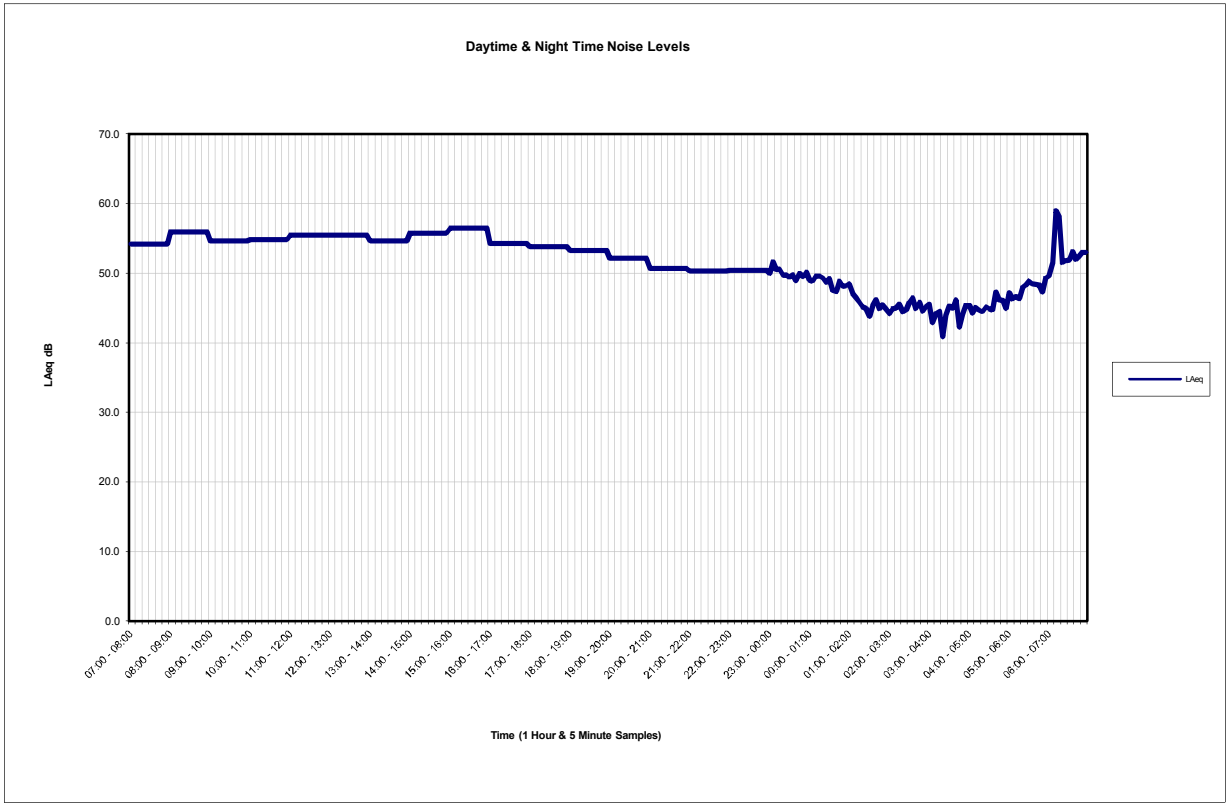
NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz)									
							31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
01:00 - 02:00 *Continued*	46.1	51.9	40.7	48.5	45.2	42.2	51.4	50.9	42.3	39.0	41.3	44.2	35.7	27.4	23.8	11.1
	44.0	51.7	36.7	46.6	43.3	39.3	52.5	50.3	41.4	38.4	39.1	42.1	33.9	23.0	19.0	11.5
	45.6	50.6	37.2	48.5	44.9	40.0	54.1	53.6	42.8	38.7	41.5	43.6	35.1	23.5	17.9	9.8
	45.3	51.2	40.7	47.0	44.7	42.7	54.5	52.8	42.9	40.3	41.1	43.2	34.9	24.9	21.1	10.5
	45.5	54.0	39.2	48.0	44.2	41.7	54.2	51.7	43.7	39.6	41.3	43.3	35.2	26.9	23.1	10.1
	44.7	52.7	39.4	47.1	43.7	41.2	53.4	51.4	42.0	37.7	39.4	42.8	35.1	26.5	22.4	9.9
	44.4	48.9	38.6	46.7	43.9	41.2	54.5	52.8	42.6	38.8	40.6	41.5	34.0	31.5	29.1	12.3
02:00 - 03:00	44.2	48.7	40.3	46.3	43.7	41.4	53.3	49.6	43.2	38.4	39.0	42.1	34.5	28.6	25.7	11.4
	44.2	49.4	39.7	46.7	43.4	41.1	52.2	53.1	43.4	39.4	39.4	41.3	34.5	31.7	29.2	12.3
	44.7	50.4	38.2	48.2	43.3	40.7	50.8	50.0	45.1	37.8	39.6	42.4	35.0	30.6	28.0	11.5
	44.3	48.3	39.7	46.1	44.1	41.3	51.3	50.7	41.1	36.8	39.9	41.9	34.5	31.0	28.2	11.7
	44.4	49.3	31.7	47.4	44.0	37.3	51.2	50.0	41.1	36.9	40.5	41.5	34.4	32.6	30.1	13.0
	43.4	49.2	38.2	45.3	43.0	40.1	51.5	49.8	40.9	36.3	39.2	41.2	33.4	27.3	24.5	10.7
	42.5	46.8	35.4	45.2	41.8	38.0	50.2	48.4	40.5	35.3	37.2	40.4	33.4	24.6	21.4	11.7
	42.6	47.8	33.9	45.3	42.0	36.7	50.7	48.7	40.4	35.2	37.8	40.6	33.1	21.7	14.8	9.8
	41.2	48.2	31.9	45.3	38.7	33.2	51.4	48.7	39.1	33.7	35.5	39.4	31.9	20.0	13.8	9.8
	41.1	46.6	29.9	44.7	39.7	31.4	51.5	50.5	40.7	33.8	37.0	38.9	30.9	18.8	12.4	10.0
	40.8	46.7	33.3	44.2	39.6	35.8	51.8	50.5	40.0	35.5	35.4	38.8	31.2	18.2	12.2	9.5
	41.0	49.2	32.6	44.5	39.5	34.9	51.2	48.5	42.2	37.4	36.4	38.8	30.9	18.2	12.1	10.5
03:00 - 04:00	43.4	48.1	36.5	46.3	42.5	39.6	54.2	52.1	41.4	35.9	38.4	41.5	33.6	22.1	17.0	11.0
	40.9	48.1	32.0	44.3	39.3	33.5	52.5	49.6	40.3	35.8	36.4	38.2	30.8	27.7	24.9	11.9
	43.5	48.8	37.7	45.7	43.1	39.9	52.8	48.8	41.1	36.4	37.0	39.6	34.2	35.6	33.4	14.5
	43.9	48.3	38.8	46.4	43.1	40.6	52.8	49.5	41.7	36.4	37.9	40.0	35.0	35.7	33.5	14.8
	46.9	55.4	41.6	48.8	45.7	42.8	53.0	50.6	41.8	37.3	38.3	40.6	38.2	41.1	39.2	19.7
	45.7	51.6	38.4	48.1	45.3	41.2	52.6	50.3	41.1	37.3	38.7	41.1	37.0	38.6	36.5	17.3
	45.2	52.5	41.3	46.8	44.5	43.1	51.8	48.0	40.7	36.7	36.2	39.9	37.0	38.8	36.7	18.3
	44.5	50.0	36.7	47.5	43.2	40.1	53.3	49.6	41.9	36.5	37.9	40.1	35.7	36.8	34.7	15.9
	44.4	51.0	39.2	46.8	43.6	40.7	52.6	50.4	44.7	37.9	38.6	40.2	35.6	36.2	33.8	14.8
	44.0	50.2	38.0	46.5	43.2	40.4	52.5	50.3	43.7	36.6	37.9	39.8	35.3	36.0	33.9	15.3
	44.9	54.5	40.9	47.1	44.1	41.7	53.1	50.4	42.6	37.3	38.9	40.8	36.1	36.4	35.4	20.8
	44.6	49.5	38.5	47.9	43.5	40.8	52.4	49.8	41.6	36.9	37.6	39.3	36.5	37.5	35.5	17.1
04:00 - 05:00	47.1	54.8	40.6	49.1	46.4	43.0	52.9	48.6	40.9	37.5	38.4	41.1	39.4	40.9	38.8	20.2
	46.2	53.5	40.2	48.8	45.5	42.3	52.2	49.8	41.0	37.4	38.0	41.0	37.7	39.9	37.7	18.3
	47.8	56.8	41.1	50.4	46.4	43.2	52.8	51.0	41.8	38.7	40.3	41.7	38.8	42.1	40.1	19.9
	46.4	51.3	40.4	48.9	45.9	42.9	50.7	48.4	40.3	37.5	38.3	41.3	38.0	40.0	37.7	17.3
	48.9	55.2	40.0	52.8	46.7	42.3	51.2	50.2	40.8	38.0	38.9	41.3	40.1	44.1	42.0	21.4
	51.4	59.6	43.3	55.5	48.8	45.4	50.0	48.0	48.3	39.7	39.6	42.7	42.8	46.9	44.8	24.1
	47.8	54.0	38.3	51.1	46.4	41.4	50.8	47.7	40.3	36.8	37.1	39.7	39.3	43.2	40.9	19.9
	46.8	52.8	40.1	49.9	45.3	42.2	49.9	46.6	40.0	35.9	35.5	39.3	38.3	42.0	39.8	19.2
	53.5	62.9	40.7	57.2	50.3	45.4	52.3	48.0	42.8	41.6	40.9	44.2	44.9	49.1	47.2	26.7
	55.1	61.8	46.9	58.5	53.7	49.5	51.0	48.8	44.5	43.5	42.8	46.1	46.7	50.8	48.5	27.3
	52.1	61.8	44.0	55.5	48.8	45.4	52.5	50.3	43.2	42.3	41.0	44.3	43.6	47.3	45.2	25.0
	49.5	57.4	41.2	52.8	48.1	43.8	52.9	50.2	43.5	40.9	40.4	42.5	41.2	44.2	41.9	22.5
05:00 - 06:00	49.1	54.3	41.7	51.3	48.8	44.6	52.5	48.4	42.5	40.3	39.3	42.2	40.5	43.8	41.7	21.7
	48.5	56.5	42.6	50.2	47.9	44.8	54.5	52.6	43.9	39.8	40.5	43.8	40.1	41.6	39.2	19.1
	47.7	55.4	40.6	50.7	46.7	42.3	54.4	53.3	43.4	40.5	40.8	43.8	39.4	39.5	37.1	17.4
	50.5	58.6	43.9	53.8	48.7	45.8	55.6	52.7	45.0	40.8	41.5	44.6	41.9	44.7	42.7	22.9
	48.0	52.1	42.5	50.1	47.4	45.4	54.1	53.4	44.9	40.7	40.8	44.0	39.6	39.8	37.3	17.0
	48.0	51.0	43.4	50.0	47.8	45.1	53.4	51.8	43.8	40.1	40.2	44.2	39.6	40.0	37.5	17.2
	50.9	58.4	44.2	53.6	49.6	46.8	55.0	52.1	44.2	41.8	43.7	45.9	41.9	44.4	42.4	22.3

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	49.6	55.1	45.4	51.9	49.0	46.6	54.4	52.8	46.6	40.5	41.6	45.5	41.2	42.1	39.7	19.3
	51.0	55.8	46.6	53.6	50.2	47.6	54.1	52.6	45.6	41.9	43.2	46.2	42.4	44.4	42.2	21.5
05:00 - 06:00 *Continued*	50.6	55.5	44.9	52.9	49.9	47.1	54.4	52.1	47.4	41.0	41.9	46.6	42.3	43.1	40.6	19.8
	51.1	55.4	47.2	53.4	50.5	48.6	54.7	53.2	46.4	42.5	44.0	46.9	42.6	43.6	41.3	20.7
	51.5	64.5	45.6	53.6	50.3	48.2	55.0	54.7	49.8	45.6	42.5	46.2	42.6	45.1	43.3	24.3
	49.6	54.1	44.1	51.7	49.2	46.1	53.3	51.4	45.1	40.9	41.3	45.7	41.3	41.8	39.5	19.0
	50.8	55.1	47.1	53.4	50.0	47.8	54.0	51.8	46.3	42.8	42.8	45.6	42.2	44.4	42.5	21.5
	53.8	64.1	48.4	56.5	52.1	49.4	55.2	53.8	47.1	44.2	47.7	49.6	44.4	46.3	45.1	23.9
	54.6	62.9	49.3	57.3	53.3	50.8	54.8	54.9	47.6	43.8	44.9	48.5	47.1	48.5	46.6	28.7
	54.9	64.5	48.4	57.0	53.1	49.5	56.5	56.9	49.8	47.7	45.6	49.1	46.7	49.0	46.7	26.0
06:00 - 07:00	53.4	59.1	47.8	56.8	52.2	49.3	56.4	55.4	50.3	46.0	44.2	47.5	45.0	47.4	45.6	24.3
	52.9	59.7	48.8	55.4	51.8	49.6	54.6	55.4	48.7	43.5	43.8	47.6	44.4	46.8	44.7	23.2
	54.0	60.9	49.6	57.2	52.2	50.2	55.0	55.5	50.3	45.2	44.1	48.2	45.8	48.0	46.0	25.1
	56.4	65.8	50.0	59.0	54.8	50.8	55.2	55.4	48.1	45.3	45.7	49.4	48.7	51.0	49.2	29.9
	53.9	60.3	49.2	56.7	52.6	50.1	56.0	55.5	49.4	44.8	44.4	48.6	46.0	47.6	45.3	24.6
	51.9	56.1	48.6	53.9	51.2	49.7	55.3	54.9	47.2	42.7	44.4	48.2	44.2	43.2	40.6	19.8
	54.1	65.9	48.9	56.6	52.0	49.5	56.1	55.7	50.1	45.0	45.1	48.8	45.0	48.2	46.3	24.5

NOISE LEVEL SUMMARY ASSESSMENT																
Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 23:00 DAYTIME AVERAGE $L_{Aeq\ 16\ HOUR}$	54.3	62.6	50.6	56.4	53.2	51.5	57.9	58.7	53.4	46.1	45.8	50.4	45.2	46.9	44.8	23.1
23:00 - 07:00 NIGHT TIME AVERAGE $L_{Aeq\ 8\ HOUR}$	49.1	57.2	43.4	51.4	47.8	45.2	51.3	51.9	44.6	39.0	42.6	46.4	38.5	39.9	38.0	15.1



DAYTIME NOISE LEVELS 07:00 - 23:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 08:00	54.2	62.0	49.9	56.6	53.1	50.9	56.8	57.1	53.4	45.8	45.0	49.0	46.5	47.6	44.9	26.0
08:00 - 09:00	56.0	63.5	51.6	58.4	54.5	52.5	58.2	58.8	51.7	45.3	45.2	50.4	47.0	50.6	47.9	26.1
09:00 - 10:00	54.7	61.5	51.9	56.4	53.8	52.5	58.3	58.8	52.3	44.6	45.0	50.9	46.5	46.6	45.5	23.7
10:00 - 11:00	54.9	61.5	51.9	56.5	54.1	52.7	58.8	60.1	56.5	44.8	45.5	51.3	46.0	46.9	45.1	23.0
11:00 - 12:00	55.5	60.9	52.0	57.5	54.7	53.0	58.1	59.1	52.7	46.3	46.8	52.2	46.1	47.4	45.3	23.3
12:00 - 13:00	55.5	65.6	51.0	57.5	53.1	51.7	57.7	59.7	55.4	45.8	44.9	50.6	44.4	49.6	48.7	24.8
13:00 - 14:00	54.7	61.4	51.1	57.0	53.9	52.0	59.1	59.8	54.4	47.1	46.0	50.4	45.6	47.7	45.5	24.0
14:00 - 15:00	55.7	63.2	50.8	58.8	54.3	52.0	59.1	59.5	55.6	47.3	46.3	50.6	46.7	49.7	47.3	25.9
15:00 - 16:00	56.5	69.1	51.3	58.6	54.9	52.7	58.8	59.3	53.4	50.7	49.7	52.0	47.6	49.3	46.9	25.7
16:00 - 17:00	54.3	60.1	50.5	57.0	53.4	51.2	58.4	59.6	54.6	49.3	46.5	50.1	45.3	46.8	44.8	23.2
17:00 - 18:00	53.8	59.0	50.9	55.6	53.2	51.8	57.5	59.4	53.6	44.6	45.6	51.1	44.2	44.5	41.9	19.7
18:00 - 19:00	53.3	60.6	50.0	55.3	52.2	50.7	59.3	58.9	53.1	45.3	45.3	49.7	44.0	45.4	42.9	20.2
19:00 - 20:00	52.2	61.5	49.5	52.9	51.4	50.3	57.0	58.0	51.6	42.0	43.8	49.7	42.3	42.4	40.9	17.3
20:00 - 21:00	50.7	57.6	48.3	52.1	50.2	49.1	57.0	57.0	51.9	44.3	44.3	49.1	40.9	27.1	19.7	10.4
21:00 - 22:00	50.3	56.9	47.6	51.6	50.0	48.6	54.8	55.5	47.6	40.8	44.1	48.8	40.7	27.6	20.2	10.5
22:00 - 23:00	50.4	56.2	47.1	51.9	50.1	48.3	54.5	55.7	48.5	41.0	44.6	48.9	40.4	25.6	14.2	9.9

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
23:00 - 00:00	50.0	55.6	46.9	51.5	49.7	47.9	54.0	54.2	48.3	39.6	43.7	48.6	40.3	24.7	12.9	9.8
	51.6	55.3	48.6	52.9	51.4	49.8	56.0	58.0	48.0	41.1	45.4	50.2	41.7	28.2	20.0	9.6
	50.5	56.1	47.4	51.9	50.3	48.3	53.5	53.8	47.4	43.5	44.1	49.0	40.8	25.0	12.4	9.6
	50.6	53.4	47.1	52.1	50.4	48.4	54.5	57.0	46.7	40.9	44.7	49.0	40.9	24.5	12.1	10.6
	49.7	52.7	46.1	51.3	49.6	47.3	52.4	53.1	44.7	38.5	43.2	48.4	40.0	24.1	13.8	9.5
	49.8	53.1	46.3	51.4	49.5	48.1	52.2	54.4	45.8	39.2	43.4	48.5	39.6	23.8	11.9	10.1
	49.4	52.8	45.9	51.3	49.0	47.1	51.8	51.9	44.5	38.2	43.3	48.0	39.7	23.8	12.0	9.4
	49.8	53.1	44.5	51.6	49.6	47.1	52.4	55.1	49.0	39.2	43.4	48.3	40.0	24.6	12.1	9.5
	49.0	51.5	44.1	50.6	49.1	46.0	51.9	53.1	43.5	37.2	42.7	47.6	39.5	23.8	11.7	9.6
	50.0	56.0	44.9	52.1	49.7	46.1	51.8	51.1	44.0	38.3	43.5	48.6	40.4	25.0	12.9	9.7
	49.5	53.9	44.5	51.1	49.2	47.6	52.4	52.2	45.0	38.4	43.3	48.0	40.2	25.2	12.7	9.5
	50.2	55.8	42.2	52.3	49.7	46.0	52.8	54.8	45.1	39.0	43.8	48.6	40.9	25.5	11.9	9.5
00:00 - 01:00	49.1	53.2	44.2	51.3	48.8	45.7	51.4	53.4	44.4	38.6	43.2	47.5	40.0	25.1	15.3	9.6
	48.9	56.2	41.8	51.0	48.4	45.2	51.2	51.9	44.9	42.1	45.2	46.8	39.3	24.1	11.7	9.5
	49.6	53.4	45.2	51.4	49.2	47.4	50.3	52.5	43.5	38.2	43.3	48.0	40.4	25.0	11.6	9.4
	49.6	56.5	44.8	51.2	49.4	46.5	51.7	52.7	46.1	38.5	43.0	48.1	40.4	26.0	15.2	9.4
	49.3	52.8	44.5	51.3	48.9	46.3	50.8	53.7	46.9	40.1	43.1	47.7	39.9	24.0	11.5	9.4
	48.7	53.7	41.1	50.5	48.4	46.0	51.6	52.0	45.1	37.8	43.1	47.2	38.7	23.0	11.5	9.6
	49.2	53.8	42.7	51.1	48.8	46.4	52.1	50.9	43.7	38.0	42.9	47.9	39.2	23.2	11.6	9.6
	47.6	51.6	42.6	49.3	47.3	45.2	53.6	53.2	44.4	36.8	41.6	46.0	37.8	24.4	15.1	9.5
	47.4	53.0	42.3	49.5	47.0	44.6	51.7	50.4	42.1	40.0	42.2	45.8	37.3	22.4	12.6	9.6
	48.9	59.0	43.4	50.3	47.8	45.4	50.5	50.5	42.9	38.1	42.5	47.6	38.8	25.9	18.6	9.6
	48.1	51.6	44.0	49.8	47.8	45.4	51.4	51.1	42.4	36.9	42.9	46.6	37.6	21.9	11.4	9.6
	48.2	51.8	41.6	50.1	48.1	45.0	51.1	50.2	43.2	37.3	42.0	46.9	38.0	22.3	11.5	9.7
01:00 - 02:00	48.5	52.5	43.3	50.2	48.4	45.8	52.2	50.4	42.6	38.8	43.2	47.0	38.2	29.7	12.9	9.5
	47.0	51.1	40.3	49.1	46.8	42.8	50.9	50.3	41.1	36.5	41.6	45.4	37.3	24.6	11.4	9.4
	46.5	51.0	42.0	48.8	45.8	43.0	52.5	50.5	42.5	36.8	40.5	44.9	37.1	21.8	11.1	9.4
	45.8	50.0	39.9	47.8	45.5	41.8	51.0	52.2	41.9	36.5	40.6	44.0	36.2	23.1	14.8	9.4

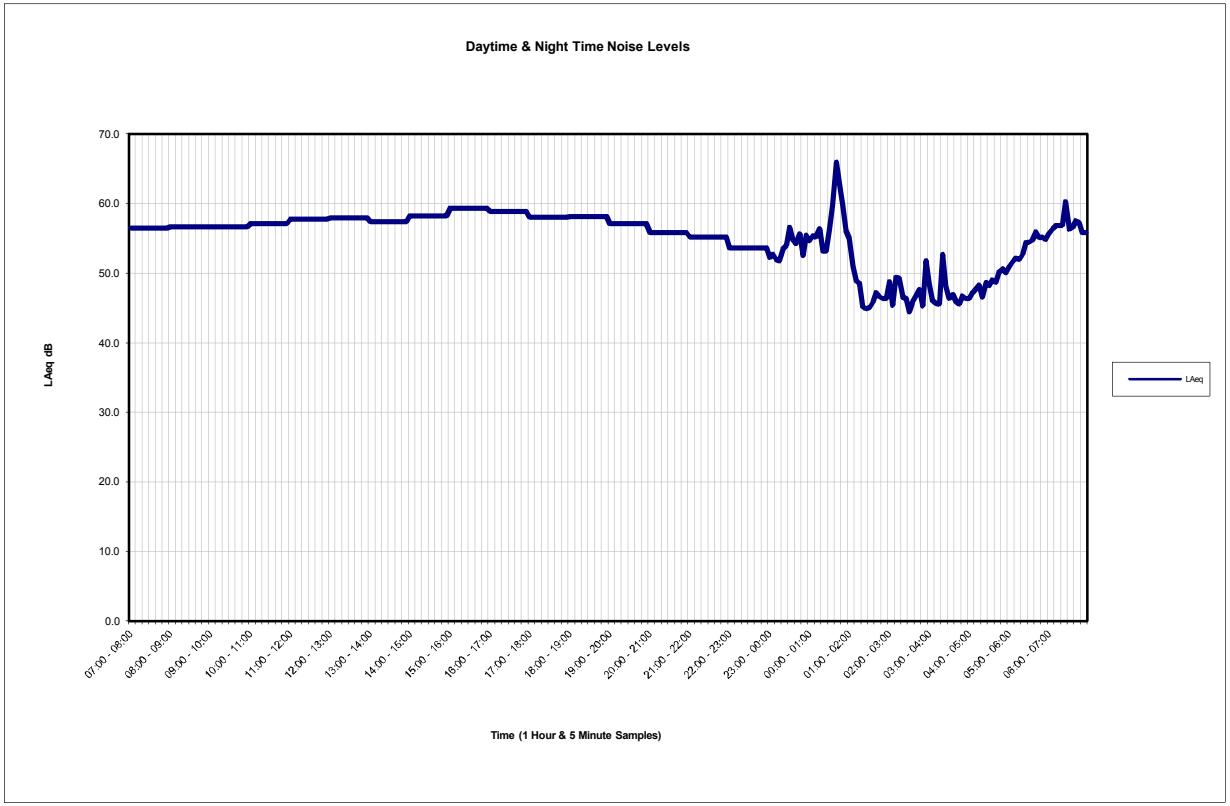
NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz)									
							31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
01:00 - 02:00 *Continued*	45.2	49.3	38.6	47.6	44.6	41.1	50.4	50.6	41.3	34.8	39.3	43.5	35.8	21.0	12.1	9.4
	45.0	50.8	35.6	47.6	44.5	40.1	50.3	49.2	42.3	35.2	39.4	43.4	35.6	20.7	11.0	9.4
	43.8	48.5	36.0	46.2	43.4	38.3	49.1	47.9	39.3	34.1	37.5	42.3	34.0	19.1	11.1	9.4
	45.4	52.2	37.4	48.0	44.8	40.8	49.6	50.0	42.5	40.6	40.5	43.6	35.4	20.2	11.1	9.4
	46.2	49.3	41.3	48.3	45.7	43.2	49.9	50.0	43.2	35.2	40.6	44.8	35.5	20.3	11.0	9.4
	44.9	50.4	34.2	47.5	44.6	39.2	50.0	48.8	41.8	34.0	38.6	43.6	34.9	19.6	11.1	9.4
	45.5	50.9	34.6	48.3	44.7	40.8	48.7	50.0	41.7	34.9	40.1	44.0	35.5	20.8	11.1	10.1
02:00 - 03:00	44.8	49.9	38.8	47.1	44.2	41.5	48.6	49.6	44.8	34.9	38.0	43.1	36.0	20.8	11.1	9.4
	44.2	51.1	35.1	46.7	43.6	38.9	48.8	49.3	43.3	34.8	38.7	42.4	34.8	19.5	11.0	9.4
	44.9	50.0	36.7	47.5	44.4	39.9	51.1	50.2	40.8	36.0	39.6	43.2	35.1	20.9	11.7	9.4
	45.0	51.1	33.2	48.2	44.0	36.9	49.3	51.1	40.3	35.3	39.5	43.4	35.1	20.2	11.1	9.4
	45.6	49.5	39.8	47.5	45.5	41.9	48.0	47.8	41.0	34.6	39.3	44.2	35.9	20.6	11.0	9.4
	44.5	49.7	37.8	46.9	44.1	39.8	47.9	47.6	39.3	34.5	39.4	42.8	34.6	19.6	10.9	9.6
	44.7	50.7	37.4	47.4	44.0	40.2	49.2	47.7	40.0	34.2	39.1	43.1	35.0	19.8	10.9	9.4
	45.8	50.6	32.4	48.1	45.5	42.0	49.2	49.1	45.6	35.9	40.7	44.2	35.4	20.1	11.0	9.4
	46.5	52.9	37.9	49.4	45.8	40.5	49.7	48.3	40.9	36.0	40.5	45.0	36.9	21.9	12.3	9.4
	44.9	50.7	38.9	47.7	43.9	40.6	50.6	47.4	39.3	35.2	39.4	43.2	35.4	20.9	11.4	9.4
	45.8	51.6	34.7	49.7	44.2	36.5	51.7	51.7	41.4	35.8	41.6	44.1	35.2	20.9	12.0	9.4
	44.6	51.5	36.3	47.2	43.8	40.5	51.5	51.9	41.5	35.9	40.6	42.6	34.4	19.8	11.4	9.4
03:00 - 04:00	45.2	49.7	39.4	47.3	44.8	41.2	48.5	48.1	39.7	34.5	39.8	43.4	35.9	20.3	11.5	9.8
	45.6	50.3	31.9	48.9	44.7	38.5	51.2	54.1	44.5	37.1	40.8	43.7	35.7	21.6	11.9	9.4
	42.9	50.1	30.7	46.1	41.5	36.3	49.4	48.7	38.9	33.5	38.6	41.0	33.0	19.5	12.8	9.4
	44.3	49.4	30.1	47.6	43.4	35.5	48.0	47.1	40.7	35.0	39.0	42.5	35.0	20.1	11.2	9.4
	44.6	48.6	38.2	47.0	44.0	40.4	49.1	49.3	40.6	35.7	40.2	42.6	35.1	20.0	11.1	9.4
	40.9	47.4	24.9	44.9	39.2	26.4	45.7	43.3	37.7	32.2	34.1	39.4	31.6	17.0	10.9	9.4
	44.0	48.9	24.7	47.1	43.6	36.6	49.1	48.1	40.4	35.0	39.7	42.1	34.1	19.2	11.3	9.4
	45.3	52.6	37.9	48.0	44.4	39.8	49.2	49.7	41.5	38.3	41.8	43.2	35.3	20.4	11.0	9.4
	45.0	49.5	36.5	47.7	44.7	39.7	48.1	48.6	39.9	35.2	40.5	43.2	35.3	20.5	11.6	9.4
	46.2	58.1	30.4	48.4	44.1	37.6	47.3	46.8	44.0	42.9	42.4	44.0	35.7	20.8	11.4	9.4
	42.3	48.0	34.7	45.9	40.4	36.8	47.3	46.4	42.0	35.9	38.4	40.2	32.3	18.0	11.0	9.4
	44.1	50.0	29.2	47.6	43.1	35.6	50.1	50.4	39.6	34.6	40.4	42.2	33.3	18.6	11.0	9.4
04:00 - 05:00	45.4	50.3	37.8	48.0	44.6	40.8	49.8	50.8	43.9	39.3	42.3	43.1	34.6	20.4	11.4	9.4
	45.4	50.2	36.3	48.0	44.8	40.6	52.1	52.5	42.7	36.1	41.7	43.3	35.2	20.6	11.4	9.4
	44.3	49.2	33.8	47.1	44.0	37.3	45.7	45.2	37.4	35.0	39.1	42.6	34.7	19.3	11.1	9.4
	45.1	49.3	31.6	47.8	45.0	37.0	49.0	51.1	39.7	36.5	41.2	43.1	35.3	20.3	11.0	9.4
	44.7	49.2	35.2	47.7	43.9	40.4	48.8	46.6	39.1	35.3	39.9	43.0	34.7	20.0	15.2	9.9
	44.5	49.6	36.2	46.8	43.9	40.4	49.6	48.0	39.6	35.6	40.6	42.4	34.6	21.0	15.9	9.6
	45.2	50.1	37.8	47.5	44.7	40.8	50.3	50.3	40.0	35.4	41.1	43.4	34.8	20.0	11.0	9.4
	44.9	51.6	40.0	46.8	44.3	41.7	49.2	48.4	40.8	35.9	40.1	43.2	35.2	19.9	11.0	9.4
	44.7	49.6	36.2	47.2	44.3	40.7	49.2	47.1	39.2	35.5	41.0	42.9	33.9	19.2	10.9	9.4
	47.3	54.5	35.0	50.7	45.8	40.0	48.3	47.4	39.7	35.6	41.6	45.8	37.6	21.9	11.2	9.4
	46.2	50.6	41.0	48.7	45.7	42.7	49.5	47.1	45.0	37.3	41.3	44.5	36.5	21.4	11.1	9.4
	46.1	51.0	34.8	49.4	45.4	37.6	48.5	50.5	43.3	35.9	41.1	44.4	36.3	22.0	15.6	10.0
05:00 - 06:00	44.9	50.9	31.2	48.3	43.3	35.7	48.0	48.0	39.5	35.8	39.7	43.2	35.3	19.7	11.1	9.4
	47.2	58.1	38.7	49.2	45.7	43.4	48.8	54.1	44.2	44.1	45.0	44.4	36.3	22.1	11.6	9.4
	46.3	52.1	40.7	48.9	45.5	42.2	52.4	52.7	46.4	39.4	42.3	44.3	35.9	21.5	11.2	9.4
	46.7	51.1	38.2	49.4	45.9	41.1	49.5	50.4	44.9	36.0	41.3	45.1	36.5	21.1	11.2	9.4
	46.4	50.9	39.1	48.7	46.0	42.2	49.1	48.6	40.6	36.2	40.9	45.0	36.2	20.5	11.1	9.4
	48.0	52.3	42.9	50.0	47.5	45.1	52.6	55.6	52.4	44.7	42.6	45.8	37.6	21.9	11.4	9.4
	48.3	52.6	44.2	50.7	47.8	45.6	51.5	53.6	42.2	37.5	43.0	46.8	38.2	22.7	11.5	9.4

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	48.9	52.8	44.5	50.7	48.6	46.0	51.6	51.8	44.7	40.8	44.0	47.1	39.0	24.4	16.2	9.6
	48.5	51.8	44.8	50.4	48.1	46.0	50.6	52.0	47.5	38.3	43.2	46.8	38.8	23.2	11.4	9.4
05:00 - 06:00 *Continued*	48.4	55.2	44.1	50.2	48.1	45.4	52.1	52.9	43.6	38.5	43.4	46.8	38.3	23.9	13.8	9.4
	48.3	51.1	44.3	50.0	48.1	45.8	51.9	54.0	43.4	40.1	44.0	46.4	38.1	23.2	11.7	9.4
	47.3	50.8	40.1	49.5	46.8	43.8	50.4	53.0	41.8	37.3	41.7	45.6	37.7	24.0	25.9	9.8
	49.3	54.0	43.7	51.6	48.8	45.3	51.9	52.1	43.6	38.8	43.7	47.4	38.7	35.0	35.2	11.9
	49.6	54.5	44.6	51.6	49.2	46.3	51.3	50.5	43.6	39.3	43.1	47.2	39.5	39.0	37.8	13.7
	51.5	59.9	45.7	53.2	50.4	48.0	52.1	52.5	44.5	42.7	44.7	47.9	40.3	44.2	41.8	16.9
	59.0	70.5	46.8	63.2	51.4	48.8	52.3	53.1	45.0	40.1	44.5	48.5	43.4	55.7	54.1	30.2
	58.1	70.4	48.4	61.3	52.5	50.2	52.3	54.0	45.2	40.8	45.9	50.0	44.0	54.5	52.5	28.1
06:00 - 07:00	51.5	54.3	48.9	52.7	51.3	49.9	53.6	54.0	47.0	42.0	45.4	49.7	41.5	35.0	36.1	12.5
	51.8	55.9	47.4	53.2	51.5	50.0	53.3	53.6	49.1	42.4	45.3	49.6	42.7	39.1	37.6	14.8
	51.9	58.1	48.5	53.4	51.4	49.7	51.6	54.7	47.5	41.5	45.1	49.5	43.0	41.0	38.5	16.3
	53.1	58.2	50.1	54.3	52.8	51.5	55.6	54.9	51.8	46.9	46.9	51.1	43.1	37.6	40.1	16.9
	52.0	54.4	49.3	53.4	51.7	50.3	53.1	53.8	46.8	42.1	46.1	50.1	42.4	36.7	37.2	14.2
	52.5	56.6	50.0	53.9	52.3	50.7	55.2	55.3	49.3	42.8	46.5	50.5	42.5	39.4	36.7	14.1
	53.0	58.7	48.5	54.4	52.7	51.0	54.3	54.3	46.9	42.6	46.6	51.0	42.5	41.1	39.8	16.3

NOISE LEVEL SUMMARY ASSESSMENT																
Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 23:00 DAYTIME AVERAGE $L_{Aeq\ 16\ HOUR}$	57.4	63.8	54.1	59.2	56.6	55.1	57.3	57.8	54.9	49.8	51.0	55.0	47.4	46.4	44.8	22.8
23:00 - 07:00 NIGHT TIME AVERAGE $L_{Aeq\ 8\ HOUR}$	54.3	60.5	50.3	56.3	53.6	51.7	55.0	55.2	48.3	44.0	45.8	49.8	47.0	47.0	44.5	27.6



Position 2

FIGURE 6
PAGE 1

DAYTIME NOISE LEVELS 07:00 - 23:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz)									
							31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 08:00	56.5	67.3	51.0	59.1	53.5	51.9	54.3	55.8	50.0	45.4	47.6	51.5	44.0	50.8	50.1	25.9
08:00 - 09:00	56.7	66.4	52.0	59.6	54.0	52.7	55.7	58.0	54.2	50.6	49.6	52.1	44.5	50.4	49.5	25.8
09:00 - 10:00	56.7	66.4	52.6	58.8	54.6	53.4	56.3	57.5	51.8	47.8	48.4	52.8	45.7	49.9	48.4	24.8
10:00 - 11:00	57.1	64.0	54.0	59.2	56.2	54.9	58.7	58.9	56.0	51.8	51.2	54.6	47.1	45.3	44.5	21.6
11:00 - 12:00	57.8	60.7	55.1	59.1	57.6	56.1	57.4	58.2	54.8	48.7	51.4	56.0	47.9	43.8	41.7	21.9
12:00 - 13:00	58.0	61.8	55.1	59.5	57.6	56.1	57.7	58.7	54.8	48.5	51.5	56.0	48.0	45.3	43.8	23.0
13:00 - 14:00	57.4	62.1	54.4	59.0	57.0	55.4	57.9	58.4	54.2	49.3	50.9	54.9	47.9	46.3	44.6	24.7
14:00 - 15:00	58.2	62.2	55.2	59.7	57.9	56.4	57.4	58.1	53.9	48.9	51.7	56.1	48.4	46.4	44.5	24.5
15:00 - 16:00	59.3	67.8	55.2	62.2	57.6	56.1	57.7	60.0	61.1	54.6	52.4	56.0	51.2	49.4	45.0	24.2
16:00 - 17:00	58.9	64.2	55.8	60.5	58.4	56.8	62.6	58.7	55.5	52.2	52.9	56.7	48.9	46.4	44.5	24.7
17:00 - 18:00	58.0	61.5	55.4	59.5	57.8	56.3	56.7	58.2	54.4	49.3	52.0	56.3	48.0	42.9	40.6	20.7
18:00 - 19:00	58.2	62.0	55.3	59.6	57.9	56.4	56.1	57.6	55.1	50.4	52.2	56.4	47.9	42.6	40.5	20.2
19:00 - 20:00	57.2	62.9	54.3	58.6	56.8	55.4	55.6	57.1	55.3	49.0	51.4	55.5	46.7	41.6	38.5	17.3
20:00 - 21:00	55.8	59.0	53.1	57.1	55.7	54.3	55.0	56.8	51.7	47.6	50.3	54.3	45.6	35.5	31.5	14.1
21:00 - 22:00	55.2	59.4	51.8	56.6	54.9	53.3	53.5	55.4	51.3	46.3	49.6	53.6	45.2	35.8	32.0	13.6
22:00 - 23:00	53.7	57.3	49.8	55.4	53.4	51.3	53.4	55.3	48.3	44.8	48.1	52.0	43.7	35.5	31.7	13.5

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz)									
							31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
23:00 - 00:00	52.3	56.7	47.9	54.2	51.8	49.7	51.2	53.3	46.9	45.0	46.6	50.5	42.3	35.6	31.8	13.1
	52.7	56.5	47.6	54.6	52.3	50.1	54.5	56.8	52.4	47.9	47.5	50.5	42.3	37.8	34.5	14.4
	52.0	56.6	47.3	54.0	51.4	49.2	51.4	52.6	48.8	46.0	46.6	49.9	42.0	38.1	35.0	15.3
	51.8	55.2	48.3	53.7	51.4	49.5	48.8	50.6	45.1	42.0	45.3	49.2	42.7	41.2	38.7	19.3
	53.6	55.8	49.5	55.0	53.6	51.3	49.3	50.5	46.4	41.8	45.8	50.2	45.4	45.0	42.9	24.2
	54.0	57.1	51.1	55.4	53.8	51.9	49.8	52.1	44.6	42.5	45.9	50.0	46.4	45.9	43.8	25.5
	56.6	60.2	54.1	58.0	56.4	55.1	50.0	53.7	44.5	43.2	46.4	50.7	49.7	50.3	48.1	30.2
	54.9	58.2	50.7	56.8	54.6	51.9	48.5	52.5	42.9	41.3	44.5	49.0	48.1	48.4	46.2	28.7
	54.3	58.8	48.5	56.4	54.4	50.3	53.5	55.7	48.4	43.8	45.9	49.7	47.1	46.7	44.4	26.9
	55.7	62.7	52.2	57.0	55.5	53.2	53.1	51.1	47.6	42.9	45.0	49.4	49.0	49.5	47.4	30.3
	52.6	56.0	48.8	54.1	52.4	50.3	50.7	49.9	45.8	42.5	44.1	48.5	45.4	44.5	42.0	24.4
	55.5	61.5	53.1	56.8	55.0	53.6	50.4	54.9	43.9	42.4	45.7	49.6	48.6	49.1	46.8	29.2
00:00 - 01:00	54.7	59.7	51.0	56.3	54.3	52.4	53.8	57.7	45.7	42.7	45.8	49.4	47.7	47.8	45.3	28.4
	55.4	61.5	49.1	57.7	55.1	50.8	53.8	52.9	44.7	43.1	46.6	49.3	48.4	48.9	46.7	29.2
	55.2	64.2	51.3	57.2	54.6	52.3	50.1	49.3	42.2	42.1	45.5	48.4	48.4	49.3	47.1	30.0
	56.4	63.3	52.1	57.6	56.2	54.1	50.6	50.4	45.0	43.4	46.9	49.5	49.7	50.5	47.9	30.9
	53.2	59.9	49.2	54.9	52.6	50.5	51.9	56.0	47.9	45.5	46.0	47.4	46.0	46.3	43.8	27.4
	53.2	57.2	50.1	55.1	52.6	50.6	48.5	50.9	45.9	40.7	43.2	46.1	46.5	47.4	44.9	28.5
	56.2	60.9	51.8	58.3	55.6	53.6	51.1	51.8	43.9	42.7	45.9	48.4	49.6	50.8	48.2	32.2
	59.7	64.0	54.7	62.4	58.8	56.8	51.7	52.3	43.3	44.8	47.6	50.7	53.2	54.5	52.0	35.6
	66.0	71.9	59.3	69.0	64.9	62.7	49.0	49.6	47.7	50.1	53.0	56.7	59.5	61.0	58.8	43.0
	62.8	67.5	58.8	65.4	61.9	59.5	49.1	52.0	45.7	47.4	50.3	53.6	56.3	57.8	55.2	39.0
	59.7	64.3	52.7	62.4	59.3	54.3	48.4	51.7	49.0	45.5	48.1	50.9	53.1	54.8	51.6	35.4
	56.1	61.1	50.1	60.0	54.0	51.5	51.4	54.6	45.6	42.8	46.5	49.0	49.4	50.4	47.7	31.3
01:00 - 02:00	55.0	62.6	49.3	57.6	54.0	51.7	48.9	52.2	44.2	42.2	46.0	48.3	48.1	49.2	46.2	30.2
	51.0	57.5	47.9	52.6	50.5	48.6	52.5	57.5	45.8	38.9	43.4	46.3	43.7	43.6	40.6	24.6
	49.0	56.3	44.5	51.5	48.1	45.3	50.5	52.7	41.8	37.2	41.4	45.3	41.9	40.1	36.2	19.7
	48.6	54.4	43.5	51.3	47.3	44.6	50.8	51.6	41.8	37.1	37.9	41.5	41.5	43.2	39.7	21.4

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	45.3	51.8	39.3	48.4	44.3	41.1	49.8	48.6	42.5	38.0	38.5	41.7	38.0	35.8	32.3	16.0
	44.9	50.6	37.5	47.7	44.1	39.2	51.9	50.5	41.4	38.4	39.1	41.4	37.3	34.3	30.5	15.0
	45.1	50.6	40.5	47.5	44.5	41.6	52.8	51.3	42.7	38.9	38.0	42.1	37.7	33.9	30.1	14.4
01:00 - 02:00 *Continued*	45.8	54.2	39.5	48.8	44.4	41.1	54.0	51.0	42.5	38.8	40.0	42.8	37.9	34.1	29.7	13.6
	47.2	57.9	36.2	49.8	45.4	38.4	51.9	50.5	41.7	38.2	39.8	42.7	39.8	39.8	35.9	20.7
	46.7	54.3	41.0	48.9	45.7	42.7	50.6	48.5	41.4	37.2	38.0	43.1	39.4	38.0	35.0	18.8
	46.4	52.6	39.7	48.5	46.0	42.1	53.0	50.8	42.0	38.1	39.7	43.1	39.0	35.5	33.0	17.5
	46.4	54.2	39.5	49.4	45.1	41.8	53.9	51.6	42.0	38.2	40.4	42.7	39.1	36.3	33.4	17.0
	48.8	54.3	44.4	50.8	48.2	45.6	54.0	51.0	42.5	38.0	40.8	42.9	41.9	42.3	39.2	22.8
	45.4	52.9	40.0	48.1	44.3	40.8	51.3	49.0	41.7	36.4	36.8	41.2	38.1	37.6	34.3	18.7
	49.4	54.4	43.3	51.7	48.6	45.4	53.4	51.3	42.6	39.1	39.1	42.6	42.7	43.6	40.6	24.6
	49.3	53.6	43.9	51.6	48.7	45.1	54.4	50.9	42.2	39.9	39.5	42.6	42.5	43.4	40.3	24.1
02:00 - 03:00	46.6	51.9	41.8	48.6	45.6	43.0	54.3	51.1	42.1	39.3	38.6	41.3	39.5	39.3	36.2	20.0
	46.4	51.0	39.7	49.1	45.5	42.5	55.0	53.2	44.0	38.2	39.8	42.7	38.9	37.1	33.4	18.0
	44.5	50.8	39.4	46.6	43.9	40.7	54.5	52.1	42.7	38.2	37.2	40.5	37.3	35.4	31.9	16.0
	45.8	51.3	40.8	47.8	45.2	42.5	57.5	57.5	44.0	38.4	39.9	42.3	38.4	34.7	30.6	15.7
	46.7	51.0	40.7	49.1	46.3	42.3	56.8	57.6	46.6	38.4	40.0	43.5	39.1	35.2	30.8	15.1
	47.7	53.2	42.5	50.4	46.7	43.8	58.1	53.8	43.1	37.5	39.9	44.2	40.6	38.0	34.5	18.5
	45.3	52.0	36.6	48.3	44.6	37.4	57.3	52.6	43.9	38.5	40.5	41.5	37.5	35.3	31.1	16.2
	51.8	57.1	42.7	54.3	51.2	47.1	57.1	53.8	44.5	39.7	42.7	45.4	45.0	45.4	43.0	25.9
	48.5	54.0	41.1	51.9	47.0	43.1	58.7	52.1	44.1	37.7	40.6	43.9	41.5	40.7	37.9	21.9
	46.1	52.9	40.7	48.1	45.5	42.6	56.4	51.9	44.4	38.4	40.3	42.2	38.8	36.6	32.5	17.6
	45.7	53.2	39.6	48.4	44.7	40.6	56.7	51.9	43.5	36.9	38.7	42.5	38.3	34.9	31.4	16.7
	45.6	55.0	38.6	47.7	45.3	40.8	53.3	51.1	43.5	36.8	38.8	42.6	38.4	34.0	29.7	14.6
	52.7	60.2	40.5	57.9	47.6	42.6	52.3	50.9	43.1	39.0	41.6	45.5	46.2	47.0	44.4	27.8
03:00 - 04:00	48.1	53.6	43.0	49.8	47.6	45.0	53.9	52.8	43.8	38.0	41.1	43.6	40.7	40.2	37.0	21.4
	46.4	52.7	41.5	48.8	45.4	42.3	53.4	50.7	42.2	36.3	39.2	42.6	38.7	37.8	34.8	19.1
	46.9	52.3	38.8	49.2	46.2	43.3	52.4	52.1	42.5	37.0	39.9	44.1	39.1	36.2	33.0	17.1
	45.9	53.3	38.3	48.1	45.2	41.5	52.6	52.4	43.5	36.5	39.2	43.0	38.2	34.7	31.1	16.3
	45.6	50.2	41.1	47.5	45.0	42.5	52.9	52.0	42.2	36.2	38.8	42.5	38.0	34.8	30.8	15.2
	46.8	56.1	41.1	49.1	46.1	42.7	54.4	51.8	42.3	36.3	40.2	44.0	39.4	34.9	31.2	16.5
	46.4	52.7	40.4	48.8	45.9	42.2	53.5	52.2	42.5	36.6	40.1	43.5	39.1	34.0	29.5	14.2
	46.4	51.3	37.4	49.2	45.6	40.3	53.1	51.3	42.5	37.0	40.1	43.4	39.1	34.6	30.6	16.0
	47.2	54.2	41.1	49.7	46.5	43.3	53.8	53.5	43.3	36.8	41.0	44.3	39.9	34.5	30.3	15.3
	47.8	50.9	43.0	49.7	47.7	44.6	53.2	52.7	43.6	37.6	41.5	45.2	40.5	33.6	28.6	14.0
	48.3	54.1	42.2	50.6	47.9	44.4	53.3	52.6	43.9	37.5	41.4	45.8	41.1	33.9	29.0	14.7
04:00 - 05:00	46.6	50.5	40.7	48.6	46.3	43.1	53.2	53.1	43.4	36.9	40.8	43.9	39.2	32.1	27.3	13.0
	48.7	52.4	41.4	50.5	48.5	45.6	56.7	56.9	49.9	39.0	43.1	46.1	40.8	33.7	28.4	13.5
	48.2	52.2	42.5	50.3	47.8	44.8	57.9	54.0	44.9	37.2	41.9	45.8	40.8	32.9	28.0	13.3
	49.1	52.9	42.9	51.6	48.5	45.1	56.6	53.3	43.3	37.1	42.3	47.0	41.4	33.1	27.8	13.3
	48.7	53.4	42.2	51.5	48.0	44.8	54.9	53.5	43.3	36.7	41.5	46.7	41.0	32.6	27.5	14.2
	50.2	54.1	46.2	52.1	50.0	47.7	55.9	53.4	44.9	39.3	44.3	48.1	42.5	33.1	26.9	13.6
	50.6	53.5	44.4	52.7	50.5	47.0	55.3	54.4	45.9	39.5	44.4	48.5	43.0	33.2	27.5	13.7
	50.1	54.5	44.7	52.0	50.0	46.8	54.7	52.5	47.8	39.1	43.7	48.0	42.3	32.7	27.3	12.5
	50.9	54.7	47.4	52.4	50.6	49.0	54.1	52.3	44.7	39.4	44.5	48.8	43.2	33.8	27.5	13.2
	51.6	54.7	47.5	52.8	51.4	50.1	54.8	55.8	47.7	40.0	45.1	49.5	43.6	33.2	26.3	12.1
05:00 - 06:00	52.2	55.2	48.4	53.7	52.0	50.3	56.0	56.3	50.0	42.2	46.3	50.1	44.1	33.6	26.5	12.2
	52.0	55.2	47.0	54.0	51.6	48.9	54.3	56.9	47.6	39.8	44.8	50.1	44.0	32.9	26.1	11.9
	52.7	54.9	50.1	54.0	52.6	51.2	55.3	54.9	46.7	41.5	45.7	50.8	45.1	33.8	26.3	12.6
	54.4	56.9	50.8	55.7	54.3	52.5	56.1	58.0	49.1	43.1	48.3	52.5	46.1	34.0	25.5	11.6

NIGHT TIME NOISE LEVELS 23:00 - 07:00

Date / Time	LAeq	Lmax	Lmin	LA10	LA50	LA90	Octave Band Centre Frequency (Hz) 31.5	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
	54.5	57.1	52.0	55.9	54.4	52.9	56.4	55.6	49.4	43.6	47.5	52.8	46.4	33.5	25.7	12.3
	54.8	57.5	51.6	56.1	54.6	52.9	55.2	56.0	48.3	43.9	48.1	53.0	46.6	33.7	26.4	13.2
05:00 - 06:00 *Continued*	56.0	58.4	53.7	57.2	56.0	54.6	55.6	57.2	50.9	45.1	49.3	54.2	47.9	34.6	25.7	11.7
	55.1	56.5	52.1	56.0	55.1	53.7	56.4	56.5	49.3	44.4	48.5	53.2	47.0	34.8	27.0	12.1
	55.2	56.9	53.1	56.1	55.2	54.0	55.9	56.8	51.0	45.1	47.7	52.9	47.5	41.7	38.8	21.8
	54.9	57.0	52.9	55.9	54.9	53.8	57.0	56.9	49.3	44.3	48.2	53.0	47.0	37.1	33.0	16.2
	55.7	58.8	53.7	56.7	55.6	54.2	57.0	57.1	49.2	44.7	48.8	53.6	47.6	38.8	39.1	16.9
	56.4	58.6	54.1	57.7	56.2	54.9	57.4	57.7	51.7	46.2	49.0	54.5	48.1	40.0	36.5	15.8
	56.9	62.5	54.2	57.9	56.6	55.3	57.5	58.6	52.4	45.2	48.8	54.4	48.6	45.1	46.3	22.8
	56.9	61.9	54.8	57.8	56.6	55.7	58.5	60.3	52.7	45.7	48.9	54.7	48.7	43.7	42.3	17.0
	56.9	64.4	55.1	57.6	56.7	55.7	57.7	58.8	53.3	46.3	49.1	54.6	48.8	44.7	42.8	19.8
06:00 - 07:00	60.3	72.1	54.7	58.5	56.6	55.8	58.8	59.3	53.8	47.3	49.1	54.4	49.5	56.2	52.0	28.0
	56.3	57.6	54.9	57.0	56.3	55.5	58.8	59.3	53.1	46.0	48.6	54.2	48.7	39.2	36.3	16.0
	56.6	59.2	55.4	57.5	56.4	55.7	58.5	59.9	53.5	47.6	49.1	54.3	48.9	43.2	40.9	20.2
	57.5	63.0	55.7	58.7	56.9	56.2	58.5	60.2	51.9	46.3	49.3	54.8	49.4	47.5	45.2	22.2
	57.3	66.1	55.4	57.9	56.7	55.8	59.8	60.6	55.0	49.8	49.7	54.5	49.1	45.0	46.8	24.5
	55.9	64.0	54.1	56.6	55.4	54.6	58.4	61.8	53.2	48.2	48.7	53.3	47.8	43.2	43.4	20.0

Calculation Sheet BS 8233:2014
(Table 2 / 4)

Client	Agform Ltd
Site	Land adjacent to Maidenstone Heath
Figure	7

Maximum Criteria	
Daytime	Night Time
35	30

Floor	Ground Floor
Room	Lounge

Daytime	MET
Evening	MET

Proposed Window Configeration	4 / 16 / 4 with standard through frame slotvent

Leqff	*The equivalent continuous sound pressure level outside the room elements under consideration*
A0	*The reference absorption area of 10m2 and is independent of frequency*
Sf	*The total façade area of the room in question*
Swi	*The area of the windows in the room*
Sew	*The area of the external wall of the room*
Srr	*The area of the ceiling of the room (if applicable)*
S	*The total area of the elements through which sound enters the room*
Dne	*The insulation value of the trickle ventilator (if applicable)*
Rwi	*The sound reduction index of the window*
Rew	*The sound reduction index of the external wall*
Rrr	*The sound reduction index of the ceiling/roof (if applicable)*
A	*The equivalent absorption area of the receiving room where A=0.163V/T*

Formula Leq2=Leqff+10log[A0/S*10^(-Dne/10)+Swi/S*10^(-Rwi/10)+Sew/10*10^(-Rew/10)+Srr/S*10^(-Rrr/10)] +10log(S/A) +3

	Octave Band Centre Frequency (Hz)					
	125	**250**	**500**	**1000**	**2000**	**4000**
Sf	10	10	10	10	10	10
Sr	0	0	0	0	0	0
Swi	4	4	4	4	4	4
Sew	6	6	6	6	6	6
Srr	0	0	0	0	0	0
S	10	10	10	10	10	10
A0	10	10	10	10	10	10
V	40	40	40	40	40	40
T (BS8233)	0.50	0.50	0.50	0.50	0.50	0.50
A	13	13	13	13	13	13
Daytime Leqff	54.6	50.0	52.0	55.6	47.6	46.0
Night time Leqff	48.3	44.0	45.8	49.8	47.0	47.0
Dne	33.0	32.0	29.0	29.0	31.0	33.0
Rwi	21.1	19.7	31.1	38.2	41.3	38.7
Rew	40.0	44.0	45.0	51.0	56.0	61.0
Rrr	28.0	34.0	40.0	45.0	49.0	53.0

***estimated**

Predicted dB(A) Level Within The Above Room During Daytime Hours (07:00-23:00)	$L_{Aeq\ 16\ HOUR}$	**30.8**	**dB(A)**

Predicted dB(A) Level Within The Above Room During Night Time Hours (23:00-07:00)	$L_{Aeq\ 8\ HOUR}$	**26.1**	**dB(A)**

Calculation Sheet BS 8233:2014
(Table 2 / 4)

Client	Agform Ltd
Site	Land adjacent to Maidenstone Heath
Figure	8

Maximum Criteria	
Daytime	Night Time
35	30

Floor	First Floor
Room	Bedroom

Daytime	MET
Evening	MET

Proposed Window Configeration	4 / 16 / 4 with standard through frame slotvent

Leqff	*The equivalent continuous sound pressure level outside the room elements under consideration*
A0	*The reference absorption area of 10m2 and is independent of frequency*
Sf	*The total façade area of the room in question*
Swi	*The area of the windows in the room*
Sew	*The area of the external wall of the room*
Srr	*The area of the ceiling of the room (if applicable)*
S	*The total area of the elements through which sound enters the room*
Dne	*The insulation value of the trickle ventilator (if applicable)*
Rwi	*The sound reduction index of the window*
Rew	*The sound reduction index of the external wall*
Rrr	*The sound reduction index of the ceiling/roof (if applicable)*
A	*The equivalent absorption area of the receiving room where A=0.163V/T*

Formula Leq2=Leqff+10log[A0/S*10^(-Dne/10)+Swi/S*10^(-Rwi/10)+Sew/10*10^(-Rew/10)+Srr/S*10^(-Rrr/10)] +10log(S/A) +3

	Octave Band Centre Frequency (Hz)					
	125	**250**	**500**	**1000**	**2000**	**4000**
Sf	8	8	8	8	8	8
Sr	12	12	12	12	12	12
Swi	2	2	2	2	2	2
Sew	6	6	6	6	6	6
Srr	12	12	12	12	12	12
S	20	20	20	20	20	20
A0	10	10	10	10	10	10
V	30	30	30	30	30	30
T (BS8233)	0.50	0.50	0.50	0.50	0.50	0.50
A	10	10	10	10	10	10
Daytime Leqff	54.6	50.0	52.0	55.6	47.6	46.0
Night time Leqff	48.3	44.0	45.8	49.8	47.0	47.0
Dne	33.0	32.0	29.0	29.0	31.0	33.0
Rwi	21.1	19.7	31.1	38.2	41.3	38.7
Rew	40.0	44.0	45.0	51.0	56.0	61.0
Rrr	28.0	34.0	40.0	45.0	49.0	53.0

***estimated**

Predicted dB(A) Level Within The Above Room During Daytime Hours (07:00-23:00)	$L_{Aeq\ 16\ HOUR}$	**32.0**	**dB(A)**

Predicted dB(A) Level Within The Above Room During Night Time Hours (23:00-07:00)	$L_{Aeq\ 8\ HOUR}$	**27.1**	**dB(A)**